

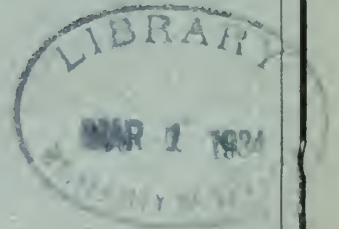
No. 88. New Series.]

[October 15, 1882.]

R
31
L86
v. 10
no. 88
Biological
& Medical
Sciences

The London Medical Record

A MONTHLY REVIEW OF THE



*Progress of the Medical Sciences and of
Subjects relating to Public Health*

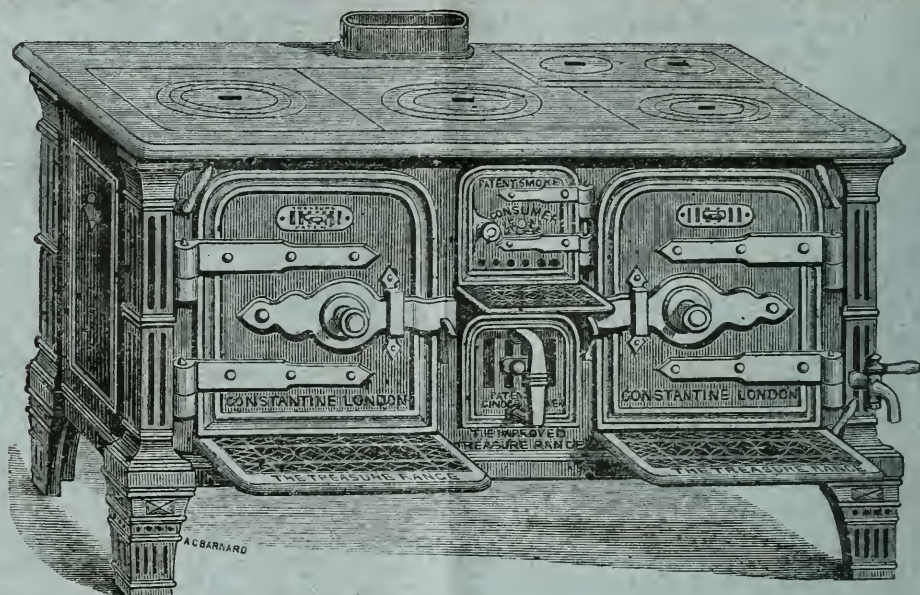
CONTENTS, SEE PAGE XV.

LONDON

SMITH, ELDER, & CO., 15 WATERLOO PLACE

PRICE ONE SHILLING AND SIXPENCE.

75 PER CENT. LESS FUEL BURNT, AND PERFECTION AND ECONOMY IN COOKERY BY USING THE PATENT TREASURE COOKING RANGE.



The First Prize was awarded to the Patentee, after nearly One Thousand Tests of a variety of Ranges, for Best Smoke-Preventing and Coal-Burning, by the Smoke Abatement Exhibition Ladies' Committee, South Kensington (vide *Times*, July 18th and 19th, 1882). Also the Grand Prize by the Exhibition—First Silver Medal.

Unsurpassed for Durability. May be placed anywhere. Cheapest Coal most suitable. Illustrated Price Books post free.

T. J. CONSTANTINE, 61, Fleet Street, E.C.

Silver Medal, Brighton Health Congress, 1881; The only Award of Merit for Paints at the Medical and Sanitary Exhibition, South Kensington, 1881.

'On mere economical grounds "Albissima" has decided advantages.'—*Building and Engineering Times*.
'Empress of Paints.'—*Architect*.

ALBISSIMA PAINT.

**NON-POISONOUS, PUREST WHITE, UNCHANGEABLE,
GREAT COVERING POWER.**

SUPERSEDES WHITE LEAD PAINTS.

TRADE MARK



ALBISSIMA is absolutely Non-Poisonous.

ALBISSIMA is 25 per cent. to 50 per cent. superior in covering power to the best White Lead Paints.

ALBISSIMA is unequalled in purity of colour by any White in the market.

ALBISSIMA is unaffected in colour by Noxious Gases or Chemical Reagents.

ALBISSIMA protects Metallic Surfaces, without attacking them.

ALBISSIMA works freely under the brush, and does not require straining.

ALBISSIMA intimately unites with the oil used, and is therefore most durable.

Apply for Testimonials of Leading Architects and Houses in the Trade.

SAMPLES AND FULL PARTICULARS, WITH LIST OF AGENTS, OF

THE ALBISSIMA PAINT COMPANY, Limited,

LONDON: 34, LIME STREET, CITY, E.C.

WHOLESALE ONLY.

Award of Merit, International Medical and Sanitary Exhibition, South Kensington, 1881.

COURT ST. ETIENNE WATERS,

Known as ARSENICAL WATERS.

This Water is considered by all eminent Doctors to be one of the most powerful Tonics and Restorers of Health.

THIS WATER IS CURATIVE IN—1, Diseases depending on a Lymphatic or Scrofulous constitution ; 2, Asthma, Chronic Bronchitis, Whooping-Cough, Biliousness ; 3, Loss of Appetite, Indigestion, Gastralgia, Constipation, Dyspepsia, Diseases of the Chest ; 4, Anæmia, Chlorosis, Weakness of all kinds, and Muscular Debility ; 5, St. Vitus' Dance, Neuralgia, Diabetes, Albuminuria, Chronic Gout and Rheumatism ; 6, Cutaneous Diseases, etc., etc. ; and in a case of Sea Sickness it has proved invaluable.

MODE OF USING IT.

Take it in preference at meals, either pure or mixed with water. Graduate the doses from half a glass to half a bottle per day.

Leave off using it in case of diarrhoea or stomach-ache setting in.

If necessary, mix it with milk, an infusion of lime, syrup, or orange peel, etc., etc.

ANALYSIS.

Chloride of Sodium	1.30
Chloride of Calcium	0.34
Nitrate of Calcium	3.03
Sulphate of Calcium	6.26
Sulphate of Potassium	0.39
Iron (Ferric Oxide)	0.35
Silica	0.60
Carbonate of Calcium	2.07
Carbonate of Magnesium	1.03
Organic matter and loss	0.80
Lithia	traces
Arsenic (AS ² 0.5) 0.5=Arsenate of Sodium	0.83
TOTAL	17.50

Copy of a Letter from John Ellerton, M.D., L.R.C.P.

'I have used the Eau St. Etienne, both in Hospital and Private Practice, and have been much pleased with the results obtained. In cases of skin disease it seems to act far better than the "Liquor Arsenicalis" so commonly prescribed by Medical Men, and I have almost entirely discarded the latter, preferring to use the Eau Court St. Etienne, as sold by Mr. E. Watteau ; it is also a most excellent tonic. When the Water becomes more thoroughly known to the Medical Profession it is certain to be extensively prescribed, as it is a very valuable addition to our list of remedies.'

'JOHN ELLERTON, M.D., L.R.C.P.'

From J. W. CRASTER, M.D.

'I have great pleasure in strongly recommending the St. Etienne Arsenical Water, as sold by M. Watteau. It is an excellent remedy for skin affections, and in anæmia and debility resulting from exhausting diseases. It is sure, safe, and efficacious, and can be depended on as a good nerve tonic.'

'J. W. CRASTER, M.D.'

'Middlesbrough, October 4th, 1881.'

From D. McCuaig, M.D., Consulting Physician,

North Riding Infirmary, Yorkshire.

'I hereby certify that I have prescribed the Arsenical Water as sole by Mr. E. Watteau, and have found it most efficacious, more especially in various cases of skin diseases, and I can therefore thoroughly recommend it as a most excellent mineral water. 'D. McCUAIG, M.D.'

All Letters and Orders to be addressed to the Sole Agent for Great Britain—

E. WATTEU, ROYAL EXCHANGE, MIDDLESBOROUGH.

BENGER'S PEPTONISED OR PARTIALLY DIGESTED FOODS.

These Preparations received a **FIRST-CLASS AWARD** (the highest obtainable) at the **INTERNATIONAL MEDICAL AND SANITARY EXHIBITION, SOUTH KENSINGTON.**

They are sent out in Tins ready for immediate use, and are strongly recommended in cases where the deranged or imperfect digestive powers of the patient cause ordinary foods to disagree. They are of agreeable flavours, and will keep in any climate.

BENGER'S PEPTONISED BEEF JELLY.

May be taken by teaspoonfuls as a restorative, or used to fortify ordinary warm beef-tea, soups, etc. It excels Liebig's Extract, inasmuch as it contains in solution, besides the salts and flavouring principles, much of the fibrin or flesh-forming element of beef, and this having undergone partial digestion is in a suitable condition for immediate absorption. **Tins, 2s. each.**

BENGER'S PANCREATISED or SELF-DIGESTIVE FARINACEOUS FOOD, for INFANTS and INVALIDS.

When this Food is mixed with warm milk, or milk and water, as directed, a self-digestive action is at once set up, by which not only the starchy matter of the flour, but the albuminoids of both the flour and the milk, are adapted for immediate absorption. By this device a complete self-digestive aliment is provided which is admirably adapted for children or persons with impaired digestion. It is extremely palatable. **Tins, 1s. 6d. and 2s. 6d. each.**

LIQUOR PANCREATICUS (BENGER).

For the Preparation of artificially digested foods at home. In 4, 8, and 16 oz. bottles, with full directions for use.

LIQUOR PEPTICUS (BENGER).

An exceedingly concentrated fluid pepsine. Dose, one or two teaspoonfuls with meals.

The above may be obtained through all leading Wholesale and Retail Houses at home and abroad.

MANUFACTURERS—

MOTTERSHEAD & CO., Pharmaceutical Chemists, 7, Exchange Street, Manchester.

Now ready, Part III., Vol. XLV., September 1882. Price 5s.

STATISTICAL SOCIETY'S JOURNAL.

CONTENTS:—

Report of the Council to the Forty-Eighth Anniversary Meeting.

Two Hundred and Fifty Years of Small Pox in London, together with a Supplement relating to England and Wales. By W. A. Guy, Esq., M.B., F.R.C.P., F.R.S.

The Relative Mortality, after Amputations, of Large and Small Hospitals, and the influence of the Antiseptic (Listerian) System, upon such Mortality. By H. C. BURDETT, Esq.

Miscellaneous:—(1). William Stanley Jevons, F.R.S.

(2). The French Railway Régime compared with the Systems established in other Countries.

(3). Additions to the Library, &c.

London: EDWARD STANFORD, 55, Charing Cross, S.W.

This day is published in cr. 8vo., price 7s. 6d.

Medical Diagnosis: A Manual of CLINICAL METHODS.

By J. GRAHAM BROWN, M.D.,

Fellow of the Royal College of Physicians of Edinburgh, Late Senior President of the Royal Medical Society of Edinburgh.

Edinburgh: BELL & BRADFUTE,

London: SIMPKIN, MARSHALL & Co.

THE HOSPITAL FOR WOMEN, SOHO SQUARE, W.

Patron—H. R. H. THE PRINCE OF WALES.

President—The Earl of Shaftesbury, K.G.

Established 1842. New Wing for Paying Patients, 1869.

Physicians—Dr. Protheroe Smith, Dr. Heywood Smith, Dr. Carter. Surgeon—Mr. Henry A. Reeves.

Assistant-Physicians—Dr. R. T. Smith, Dr. Holland, Dr. Mansell-Moullin.

Surgeon-Dentist—Mr. Frederic Canton.

Administrator of Anæsthetics—Mr. Thomas Bird.

Pathologist and Curator of Museum—Dr. Bedford Fenwick.

The Out-patient Department of the Hospital is open for Clinical instruction in the Diseases of Women to gentlemen in practice and students in their third year. The number of Pupils attending each physician is limited, so as to afford every opportunity for practical instruction. Out-patients are seen daily at 10 a.m. Operations, Thursdays at 2 p.m. Beds 62. For further information as to time of attendance, fees, etc., apply to the Secretary at the hospital.

DAVID CANNON, Secretary.

KIRKES' PHYSIOLOGY.

Tenth Edition, revised, with 420 illustrations, post 8vo, 14s.

KIRKES' HANDBOOK OF PHYSIOLOGY.

By W. MORRANT BAKER, F.R.C.S.,

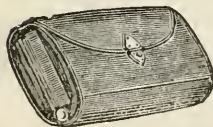
Lecturer on Physiology, and Assistant Surgeon to St. Bartholomew's Hospital, and Surgeon to the Evelina Hospital for Sick Children.

The Chapter on the Chemical Composition of the Human Body has been in great part re-written; and the text has been much altered in many others, especially the Chapters on the Blood, Circulation, Respiration, Digestion, and the Nervous System.

About 60 new Illustrations have been added.

JOHN MURRAY, Albemarle Street.

NEW AND SECOND-HAND



ARMY, AMPUTATING, POST-MORTEM, DISSECTING, and POCKET DRESSING CASES, by the best Makers, at moderate prices.

NEW AND SECOND-HAND MICROSCOPES AND OSTEOLOGY.

The GENERAL PRACTITIONER'S POCKET CASE, price £6 10s.

Illustrated Catalogue, Three Stamps.

Retail Depot for the New Patent

CARBOLIZED SOAP LEAVES

FOR MEDICAL MEN

WALTER LAWLEY

Farrington Street, near Ludgate Circus, London.

(Established over a Century.)

WORKS BY DR. DOBELL,

Consulting Physician (late Senior Physician) to the Royal Hospital for Diseases of the Chest, etc.

Just published, a New and Enlarged Edition, carefully Revised and Annotated, with Coloured Plate,

On Loss of Weight, Blood-Spitting, and LUNG DISEASE. To which is now added Part VI, on the FUNCTIONS and DISORDERS of the LIVER, and their Management in accordance with the Results of Modern Discovery.

Affections of the Heart and in its Neighbourhood. Cases, Aphorisms, and Commentaries. Illustrated. Second Issue.

On Winter Cough, Catarrh, Bronchitis, EMPHYSEMA, ASTHMA. Coloured Plates. Third Edition.

Practitioners and Students' Guide to PHYSICAL DIAGNOSIS: Demonstrations of Diseases in the Chest. Coloured Plates.

On Diet and Regimen in Sickness and HEALTH, and on the Interdependence and Prevention of Diseases, and the Diminution of their Fatality. Sixth Edition

Report on the Use of Pancreatic Emulsion and PANCREATINE, as first introduced into Medical Practice by Dr. Dobell in 1863.

Reports on the Progress of Practical and SCIENTIFIC MEDICINE in Different Parts of the World. Two Vols.

Dr. Dobell's Reports on Diseases of the CHEST. Contributed by distinguished coadjutors in different parts of the world. Three Vols.

A Descriptive Catalogue of the above Works, with Prices, Lists of Illustrations, Opinions of the Press, and the Table of Contents of each Volume, on application at LEWIS'S LIBRARY, 136, Gower Street, London, W.C.

MR. OAKLEY COLES' WORKS.

Now ready, Third Edition, demy 8vo, 12s. 6d.

Deformities of the Mouth, their Mechanical Treatment. With an Appendix of Illustrative Cases. London; CHURCHILL.

OPINIONS OF THE PRESS ON THE 1st and 2nd Editions.

Lancet, Nov. 28th, 1868.—"The work is full of useful information. . . . of every day utility to the practitioner."

Lancet, July 16th, 1870.—"The Second Edition of this work shows that the Author has continued to devote himself with zeal to the investigation and treatment of a very interesting class of cases. We recommend the work to the study of both Surgeons and Dentists."

British Journal of Dental Science, August 1870.—"The Second Edition bears upon its pages the most satisfactory evidence of the industry and zeal with which he has followed up the study and practice of the speciality he has devoted himself to with so much success. . . . Altogether, we must heartily congratulate Mr. Coles on this creditable completion of a work which cannot but redound to his credit wherever it is known."

A Manual of Dental Mechanics.

With 150 Illustrations. CHURCHILL.

American Dental Register, November 1874.—"The work we regard as a very valuable one for the student, and, indeed, for the practitioner. It should be in every Dentist's library."

Notes for Dental Students. 2s. 6d.

BUTCHER, 4, Crane Court, Fleet Street.

OPINIONS OF THE PRESS.

British Journal of Dental Science, August 1876.—"We cordially welcome this useful little book. . . . Of great value to those preparing for the Dental Diploma. . . . We hope there will soon be a second edition needed."

The Doctor, September 1876.—"Carefully arranged and very complete. Indeed, they seem to try to take in rather more than sufficient for Dental Students. . . . We have no other fault to find with this notebook, which appears a model of what such a work should be."

The Mouth and Teeth during Pregnancy. Reprinted, by permission, from the Transactions of the Odontological Society. Pp. 31. Price 1s. 6d. London: WYMAN & SONS, Great Queen Street.

OPINIONS OF THE PRESS.

The British Medical Journal.—"The author has evidently paid considerable attention to the subject, and gives many useful hints as to the management and relief of the distressing toothache and neuralgia complicating pregnancy. . . . The remarks on treatment are practical, and will repay perusal. . . . The Practitioner will do well to carry out the suggestions offered by the author."

THE EXCELSIOR' PATENT SPRING MATTRESS

Patronised by Royalty; the Nobility; the Medical Profession.

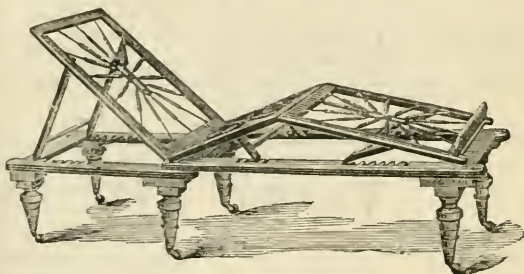
Awards:—Five Prize Medals; Seven Certificates of Merit.

THE 'EXCELSIOR' INVALID CHAIR.



With Movable Back, and with or without adjustable leg support. The Leg-Rest when detached forms an admirable Bed-Rest.

THE 'MATLOCK' INVALID COUCH.



Reducible from 6 ft. 9 in. to 4 ft. 3 in. Also made in one length, not reducible.

Made in Mahogany, Oak, Pitch-Pine, and Imitation Ebony.

The 'Excelsior' Patent Spring Mattress. The 'Excelsior' Invalid Bed.
THE 'EXCELSIOR' BED-REST. THE 'MATLOCK' BED-REST.

Illustrated Descriptive Circulars and Price Lists from

CHORLTON & DUGDALE, Manchester.

INDEX TO ADVERTISEMENTS.

For Contents of this Number see page 15.

ABDOMINAL BELTS—Salmon's	-	-	-	7	PAPER HANGINGS, FREE FROM ARSENIC—Wm. Woollams & Co.	7		
ASYLUMS (PRIVATE)—Dr. Dickson, Wye House	-	-	-	6	PATENT BOOTS—The Alupikos	-	-	8
Dr. Harmer	-	-	-	8	PHARMACEUTICAL PREPARATIONS—Allen and Haaburys	Cover	4	
BOOKS—Dobell's Works	-	-	-	2	Burroughs, Wellcome, and Co.	-	-	20
Graham Brown on Medical Diagnosis	-	-	-	2	Corbyn, Stacey, & Co.	-	-	1
Kirke's Physiology	-	-	-	2	Fellows' Hypophosphites	-	-	9
London Medical Record and Sanitary Record Diary	-	-	-	10	Mackenzie's Compound Cod-liver Oil Emulsion	-	-	8
Oakley Coles on Deformities of the Mouth	-	-	-	2	Savory and Moore	-	-	16
Smith, Elder, and Co.'s List	-	-	-	4 and 5	Symes and Co.'s Lac Bismuthi	-	-	7
Statistical Society's Journal	-	-	-	2	Umney's Fluid Extract of Cinchona	-	Suppt.	1
The Sanitary Record	-	-	-	12	Wilson's Lin. Plumbi Lactatis Co.	-	-	19
CARRIAGES—Beddoes Moore's Improved Doctor's Gig	-	-	-	6	Wright's Liquor Carbonis Detergens	-	Suppt.	
Windover's Light and Durable Patent Carriages	-	-	Cover	3	Young and Postans' Phosphorised Cod Liver Oil	-	-	6
COOKING STOVES—Constantine	-	-	Cover	2	A. and M. Zimmermann	-	Suppt.	2
DIETETIC PREPARATIONS—Benger's Peptonised Foods	-	-	-	1	SANITARY APPLIANCES—Raimes's Universal Deodoriser	-	-	14
Brand and Co.'s Preparations	-	-	-	7	SOAP SHEETS	-	-	19
Conroy's Malt Coffee	-	-	-	14	SURGICAL APPLIANCES—P. Bourjeaud	-	-	6
Fry's Cocoa Extract	-	-	-	12	Brady and Martin, Newcastle	-	-	9
Liebig Company's Extract of Meat	-	-	-	9	Ferris's 'Perfect Clinical' Maximum Thermometer	-	-	14
Liqueur Chateau Selbois	-	-	-	8	Harvey and Reynolds' Clinical Thermometers, etc.	-	-	8
HOSPITAL—The Hospital for Women	-	-	-	2	Lawley, Walter	-	-	2
MATTRESS (Patent)—Chorlton and Dugdale	-	-	-	3	Mawson and Swann	-	-	12
MINERAL WATERS—Blake and Co.	-	-	-	6	Nicholls and Son's Hypodermic Syringe	-	-	19
Court St. Etienne	-	-	-	1	TRANSLATIONS—The A B C Translations Bureau	-	-	8
Hunyadi János	-	-	-	17	TRICYCLE—The Cheylesmore	-	-	12
La Bourboule	-	-	-	6	WHISKY—Kinahan's	-	-	6
Pullna Bitterwater	-	-	-	6	WINES—Cadiz Wine Company	-	-	6
Salts of the Waters of Moura	-	-	-	19	Max Greger's Hungarian Win	-	Suppt.	1
PAINT—Albissima	-	-	Cover	2	W. and A. Gilbey	-	-	13

SMITH, ELDER, & Co.'s ANNOUNCEMENTS.

THE NEW DISSECTOR FOR FIRST-YEAR STUDENTS.

Now ready, with 564 Illustrations, 8vo, price 25s.

HUMAN MORPHOLOGY.

A TREATISE ON PRACTICAL AND APPLIED ANATOMY.

By HENRY ALBERT REEVES, F.R.C.S.E.,

Formerly Demonstrator of Anatomy at the London and at the Middlesex Hospital Medical Colleges, and Lecturer on Anatomy at the London School of Medicine for Women; Surgeon, and formerly Pathologist to the Hospital for Women; Surgeon to the Royal Orthopædic Hospital; Surgeon to the East London Children's Hospital; Assistant Surgeon and Teacher of Practical Surgery at the London Hospital; Consulting Surgeon to the Westminster General Dispensary; formerly Assistant Surgeon to the Central London Ophthalmic Hospital; and Surgeon in co-charge of the Aural Department and Surgical Registrar at the London Hospital, etc.

VOLUME I. Contents: THE LIMBS AND THE PERINÆUM.

Now ready, with Illustrations, post 8vo, 2s.

FIRST AID TO THE INJURED.

Five Ambulance Lectures.

By Dr. FRIEDRICH ESMARCH.

TRANSLATED FROM THE GERMAN BY

HER ROYAL HIGHNESS PRINCESS CHRISTIAN.

NEW EDITION OF PLAYFAIR'S MIDWIFERY.

Now ready, Fourth Edition, 2 vols., demy 8vo, with 166 Illustrations, 28s.

A TREATISE ON

THE SCIENCE AND PRACTICE OF MIDWIFERY.

By W. S. PLAYFAIR, M.D., F.R.C.P.

Physician-Accoucheur to H.I. and R.H. the Duchess of Edinburgh; Professor of Obstetric Medicine in King's College; Physician for the Diseases of Women and Children to King's College Hospital; Consulting Physician to the General Lying-in Hospital and to the Evelina Hospital for Children; late President of the Obstetrical Society of London; Examiner in Midwifery to the University of London and to the Royal College of Physicians.

NEW EDITION OF BRISTOWE'S MEDICINE.

Now ready, Fourth Edition, 8vo, price 21s.

A TREATISE ON

THE THEORY AND PRACTICE OF MEDICINE.

By JOHN SYER BRISTOWE, M.D. Lond., F.R.S.,

Fellow and formerly Censor of the Royal College of Physicians; Senior Physician to, and Joint Lecturer on Medicine at, St. Thomas's Hospital; President of the Society of Medical Officers of Health; Examiner in Medicine to the Royal College of Surgeons; formerly Examiner in Medicine to the University of London, and Lecturer on General Pathology and on Physiology at St. Thomas's Hospital.

NEW EDITION OF HOLMES'S SURGERY.

Just published, the Third Edition, with upwards of 400 Illustrations, royal 8vo, 30s.

SURGERY: ITS PRINCIPLES AND PRACTICE.

By TIMOTHY HOLMES, M.A. Cantab., F.R.C.S.,

Surgeon to St. George's Hospital.

NEW EDITION OF EDIS'S 'DISEASES OF WOMEN'.

Just published, the Second Edition, thoroughly Revised, with numerous Illustrations, demy 8vo, 12s. 6d.

DISEASES OF WOMEN:

INCLUDING THEIR PATHOLOGY, CAUSATION, SYMPTOMS, DIAGNOSIS, AND TREATMENT.

A Manual for Students and Practitioners.

By ARTHUR W. EDIS, M.D. Lond., F.R.C.P.,

Assistant Obstetric Physician to the Middlesex Hospital, Physician to the Chelsea Hospital for Women, etc.

In Preparation.

A HANDBOOK ON OBSTETRICS;

INCLUDING THE PHYSIOLOGICAL & PATHOLOGICAL HISTORY OF PREGNANCY & CHILDBED.

By ROBERT BARNES, M.D., and FANCOURT BARNES, M.D.

LONDON: SMITH, ELDER, & CO., 15, WATERLOO PLACE.

SMITH, ELDER, & Co.'s PUBLICATIONS.

Demonstrations of Anatomy: being a Guide to the Knowledge of the Human Body by Dissection. By GEORGE VINER ELLIS, Emeritus Professor of University College, London. Ninth Edition, revised. With 243 Engravings on Wood. Small 8vo, 12s. 6d.

The Descriptive Atlas of Anatomy: a Representation of the Anatomy of the Human Body. In 92 royal 4to Plates containing 550 Illustrations. Introducing Heitzmann's Figures, considerably modified, and with many original drawings from nature. By E. NOBLE SMITH, F.R.C.S. Edin. Bound in half leather, 25s.

A Directory for the Dissection of the Human Body. By John Cleland, M.D., F.R.S., Professor of Anatomy at the University of Glasgow. Second Edition, fcap. 8vo, 3s. 6d.

Illustrations of Dissections. In a Series of Original Coloured Plates, the size of Life, representing the Dissection of the Human Body. By G. V. ELLIS, and G. H. FORD. Imperial folio, 2 Vols., half-bound in morocco, £6 6s. May also be had in parts, separately. Parts 1 to 23, 3s. 6d. each; Part 24, 5s.

Quain and Wilson's Anatomical Plates. 201 Plates. Two vols., royal folio, half bound in morocco, or Five Parts bound in cloth. Coloured, price £10 10s.

Atlas of Histology. By E. Klein, M.D., F.R.S., Lecturer on Histology at St. Bartholomew's Hospital Medical School; and E. NOBLE SMITH, F.R.C.S. Edin., etc., formerly Senior House Surgeon to St. Mary's Hospital, and Resident Medical Officer to the Children's Hospital at Bristol, and the Lock Hospital, London. A complete representation of the Microscopic Structure of Simple and Compound Tissues of Man and the Higher Animals, in carefully-executed coloured engravings, with Explanatory Text of the Figures, and a concise account of the hitherto ascertained facts in Histology. Royal 4to, with 43 Coloured Plates, bound in half-leather, price £4 4s.; or in 13 parts, price 6s. each.

A Manual of Pathological Histology. By Cornil and Ranvier. Translated by Authority from the New and Rewritten French Edition, with the original Illustrations. Histology of the Tissues. Demy 8vo, price 21s.

A Text-Book of Practical Histology. With 30 Outline Plates, 1 Coloured Plate, and 27 Wood Engravings. By WILLIAM STIRLING, M.D., Sc.D., F.R.S.E., Regius Professor of the Institutes of Medicinæ in the University of Aberdeen. Demy 4to, price 14s.

A Course of Practical Histology. By Edward Albert Schäfer, Assistant Professor of Physiology, University College. With numerous Illustrations. Crown 8vo, 10s. 6d.

Elements of Human Physiology. By Dr. L. Hermann, Professor of Physiology in the University of Zürich. Second Edition. Entirely re-cast from the Sixth German Edition, with very copious Additions and many additional Woodcuts. By ARTHUR GAMGEE, M.D., F.R.S., Brackenbury Professor of Physiology in Owens College, Manchester, and Examiner in Physiology in the University of Edinburgh. Second Edition. Demy 8vo, 16s.

The Surgery of Deformities; the Nature, Symptoms, and Treatment of Deformities of the Human Body. A Manual for Students and Practitioners. By E. NOBLE SMITH, F.R.C.S. Ed., L.R.C.P. Lond., etc., Surgeon to the Orthopaedic Department of the Farringdon Dispensary, formerly Senior House-Surgeon to St. Mary's Hospital, and Resident Medical Officer to the Children's Hospital, Bristol, and to the Lock Hospital, London. Large crown 8vo, with 118 Illustrations, price 10s. 6d.

An Index of Surgery: Being a Concise Classification of the Main Facts and Theories of Surgery for the use of Senior Students and others. By C. B. KEETLEY, F.R.C.S., Senior Assistant Surgeon to the West London Hospital, Surgeon to the Surgical Aid Society. Crown 8vo, 10s. 6d.

Antiseptic Surgery: its Principles, Practice, History, and Results. By W. Watson CHEYNE, M.B., F.R.C.S., Assistant Surgeon to King's College Hospital, and Demonstrator of Surgical Pathology in King's College. With 145 Illustrations, 8vo, 21s.

Syphilis and Local Contagious Disorders. Second Edition, entirely re-written. By BERKELEY HILL, M.D. Lond., F.R.C.S., Professor of Clinical Surgery in University College, Surgeon to University College Hospital and to the Lock Hospital; and ARTHUR COOPER, L.R.C.P., M.R.C.S., late House-Surgeon to the Lock Hospital, etc. Royal 8vo, 18s.

The Essentials of Bandaging; for Managing Fractures and Dislocations; for Administering Ether and Chloroform; and for using other Surgical Apparatus. With 134 Engravings. By BERKELEY HILL, M.B. Lond., F.R.C.S., Professor of Clinical Surgery in University College; Surgeon to University College Hospital, and to the Lock Hospital. Fourth Edition, Revised and much Enlarged. Fcap. 8vo, 5s.

The Student's Manual of Venereal Diseases. Being a concise Description of those Affections and of their Treatment. By BERKELEY HILL, M.B., Professor of Clinical Surgery in University College, London; Surgeon to University College, and Surgeon to the Lock Hospital; and by ARTHUR COOPER, late House Surgeon to the Lock Hospital. Second Edition. Post 8vo, 2s. 6d.

A Manual of Dental Surgery and Pathology. By Alfred Coleman, L.R.C.P., F.R.C.S. Exam., L.D.S., etc., Senior Dental Surgeon and Lecturer on Dental Surgery to St. Bartholomew's and the Dental Hospital of London; Member of Board of Examiners in Dental Surgery, Royal College of Surgeons; Late President Odontological Society of Great Britain. With 388 Illustrations, crown 8vo, 12s. 6d.

Clinical Manual for the Study of Medical Cases. Edited by James Finlayson, M.D., Physician and Lecturer on Clinical Medicine in the Glasgow Western Infirmary, etc. With special Chapters by Professor GAIRDNER on the Physiognomy of Disease; Professor STEPHENSON on Disorders of the Female Organs; Dr. ALEXANDER ROBERTSON on Insanity; Dr. SAMSON GEMMELL on Physical Diagnosis; Dr. JOSEPH COATS on Laryngoscopy, and also on the Method of Performing Post-Mortem Examinations. Crown 8vo, with numerous Illustrations, 12s. 6d.

Skin Diseases: including their Definitions, Symptoms, Diagnosis, Prognosis, Morbid Anatomy, and Treatment. A Manual for Students and Practitioners. By MALCOLM MORRIS, Joint Lecturer on Dermatology, St. Mary's Hospital Medical School; formerly Clinical Assistant, Hospital for Diseases of the Skin, Blackfriars. With Illustrations, crown 8vo, 7s. 6d.

A Manual of Midwifery for Midwives. By Fancourt Barnes, M.D. Aber., M.R.C.P. Lond., Physician to the British Lying-in Hospital; Assistant Obstetric Physician to the Great Northern Hospital; Assistant Physician to the Chelsea Hospital for Women. Crown 8vo, with numerous illustrations, 6s.

LONDON: SMITH, ELDER, & CO., 15, WATERLOO PLACE.

P. BOURJEAUD, INVENTOR OF THE ELASTIC SPIRAL APPLIANCES.

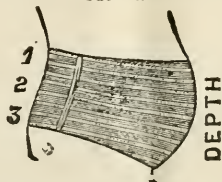
49, Davies Street, Berkeley Square, London, W., also at Paris and Marseilles.



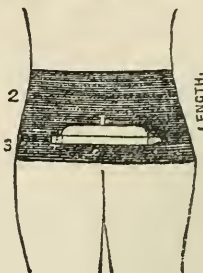
Spiral Elastic Belt and Air Pad for Prolapsus Uteri or Ani.

ESTABLISHED 1848.

Spinal Abdominal Supporter, free from under straps and buckles.



To be worn before or after confinement.



Hypogastric Belt and Air-pad supporter for the displacement of the womb.

Mr. Bourjeaud's appliances are made of an extremely fine and large texture, and wash as ordinary linen. Illustrated Catalogue free by post.

Messrs. YOUNG & POSTANS

Beg to direct the attention of the Profession to their List of New Popular Effervescing and other Preparations, which are largely used.

Granular Effervescing Bismuth and Pepsine.

Granular Effervescing Bismuth, Pepsine, & Steel.

Introduced at the suggestion of the late Dr. Thos. Hawkes Tanner.

Gran. Eff. Bismuth, Pepsine, and Quinine.

Gran. Eff. Bismuth, Pepsine, and Strychnine.

Gran. Eff. Iron and Arsenic. Pepsine Porci.

Pepsine Wine. Pepsine Pills. Pepsine Lozenges.

Phosphorised Cod-Liver Oil. THE ORIGINAL PREP.

In 1853, Dr. Glover prescribed Phosphorised Cod-Liver Oil (*Lancet* Jan. 1, 1853), 27 years ago and more. Beware of spurious imitations.

PRESERVED RIPE INDIAN BAELE FRUIT.

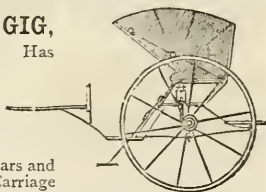
Recommended by Sir Joseph Fayrer, M.D.

YOUNG & POSTANS, 35, Baker St., London, W.

BEDDOES MOORE'S

Improved DOCTOR'S GIG,

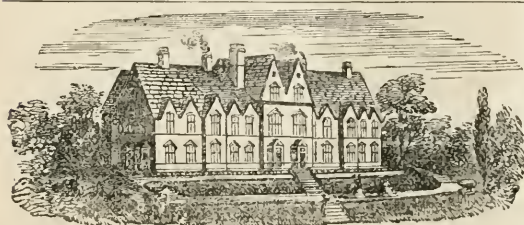
With removable leather hood. Has more advantages than Cab or Brougham; no oscillation or knee motion; one-third the weight and cost; any size or colour. See Letters in *Brit. Med. Jour.*, 1880 and 1881; *The Lancet*, Nov. 12, 1881.—Particulars and Drawings from Oldswinford Carriage Works, Stourbridge.



AERATED LITHIA WATER.—Messrs.

BLAKE, SANDFORD & BLAKE are prepared to supply the LITHIA WATERS (of which they were the original manufacturers under Dr. GARROD's instruction) of any strength prescribed by the Profession for special cases. Those in constant use contain two grains and five grains in each bottle, either by itself or combined with BICARBONATE of POTASH or PHOSPHATE of AMMONIA. Also, POTASH, CITRATE of POTASH, SODA, SELTZER, VICHY, and MINERAL-ACID WATERS, as usual.

BLAKE, SANDFORD & BLAKE, Pharmaceutical Chemists, 47, PICCADILLY.



WYE HOUSE ASYLUM, BUXTON, DERBY-SHIRE, for the Middle and Upper Classes of BOTH SEXES, is beautifully situated in the healthy and bracing climate of the Derbyshire hills, and is directly accessible by the Midland and the London and North-Western Railways.—For terms and other particulars address the Resident Physician and Proprietor, Dr F. K. DICKSON.

GOLD MEDAL, PARIS EXHIBITION, 1878.

KINAHAN'S

PURE, MILD AND MELLOW.

DELICIOUS AND MOST WHOLESOME.

LL

THE CREAM OF OLD IRISH WHISKIES

WHISKY.

Dr. Hassall says:—"Soft and Mellow, Pure, well Matured, and of very excellent quality."

The Gold Medal, Dublin Exhibition, 1865.

20, GREAT TITCHFIELD STREET, LONDON, W.

PULLNA BITTER WATER

(BOHEMIA'S TREASURE).

'The oldest and most valuable spring known.'

VIRGIN MONTILLA SHERRY

21s. PER DOZEN.

THIS LIGHT, ELEGANT, PALE, DRY

SHERRY,

WHICH pays only 1s. duty (the same as the Light French and German Wines), is very suitable for persons of weak digestion, being so free from spirit. One Dozen for Sample, Carriage Free; afterwards, Three Dozen and upwards.

CADIZ WINE COMPANY, 8, DUKE STREET, ST. JAMES'S, S.W.

ESTABLISHED 1847.

LA BOURBOULE.

A Powerful Strengthening Mineral Water.

The SEASON opens on the 25TH MAY, and lasts until the 1ST OCTOBER.

Situated at about five miles from the station of Laqueuille, on the Railway line from Clermont to Tulle.

Omnibuses & Carriages meet every Train.

Strengthens delicate children and weakly persons. Prescribed in *Anæmia, Lymphatism, Affections of the Skin and Respiratory Organs, Diabetes, and Ague.*

Sold by all Chemists.

BRAND & CO.'S ESSENCE OF MALT

(Prepared under DENCE & MASON'S Patent Process).

IN introducing this article to the Medical Profession and the Public, BRAND & CO. can recommend it with confidence, for the following reasons:—

- 1.—It consists solely of the Essence or Soluble Portion of Pure English Malt of the Finest Quality, without admixture or flavour.
- 2.—It is prepared in a highly Concentrated Form, and is offered at a Moderate Price, having regard to its high quality.
- 3.—It is prepared under 'Dence & Mason's' Patent Process, which preserves in a most perfect manner the AROMA and DIASTASE of the Malt, whilst all sediment and indigestible matter are carefully excluded.

It will thus be found of great value as an article of Invalid Diet, combining the element of self-contained nutriment with those properties of the 'Diastase' which act as an aid to the digestive organs in the assimilation of other food.

It is most valuable in cases of general debility arising from defective nutrition; in cases of nervous exhaustion: in consumption it will be found valuable, either alone or in conjunction with Cod-liver Oil, and in many other complaints it will be very beneficial to the patient.

It possesses an agreeable aromatic saccharine flavour, and can be administered either alone or as a beverage diluted with water, in a cup of Beef Tea made from 'Brand and Co.'s Concentrated Beef Tea,' in Cocoa, or in such other manner as may be recommended by the Medical Adviser according to the circumstances of the case.

CAUTION.—BEWARE OF IMITATIONS.

The above is prepared solely by *Brand & Co.*

PURVEYORS OF SPECIALITIES FOR INVALIDS TO H.R.H. THE PRINCE OF WALES.

Sole Address—11, LITTLE STANHOPE STREET, HERTFORD STREET,
MAYFAIR, LONDON, W.

LAC BISMUTHI (SYMES)

Hydrate of Bismuth, possessing in a specially active and high degree the properties of this drug. Dose 5j to 5ij.

LAC BISMUTHI ET CERII (SYMES)

Particularly useful in Sickness during Pregnancy. Dose 5j to 5ij.

Originated and prepared by SYMES & CO., Manufacturing Chemists, Liverpool.

SALMON'S ABDOMINAL BELT, SALMON'S OBSTETRIC BINDER,

In Silk Elastic, and Thread ditto, from 25s. to 50s.



The Belt is light in texture, and affords a more lifting support than any hitherto made, completely supporting the lower part of the Abdomen. It is recommended in cases of Obesity, Tumour, Prolapsus Uteri, and during and after Pregnancy.

HENRY R. SALMON,
87, Wimpole St., Cavendish
Sq., London, W.
(corner of Wigmore St.)

For immediate use after delivery. 6s. 6d.; by post, 6s. 10d.



The Binder is a substitute for the tow, generally used immediately after labour. It is made of strong linen, and dispenses with the usual pinning. The advantages of the Binder are facility of application, combined with comfort and greater efficiency. Measurement required, ordinary size of the waist.

HENRY R. SALMON,
Wimpole Street, Cavendish Square,
London, W.
(corner of Wigmore Street).

WALL PAPERS FREE FROM ARSENIC.

WM. WOOLLAMS and CO., Manufacturing Paper Stainers,

Have for many years supplied Block Printed

ARTISTIC WALL PAPERS, Guaranteed free from Arsenic.

Manufactory—110, HIGH STREET, Manchester Square, London, W.

May be obtained of all Decorators. Samples for testing free to all Medical Men. Special Prize Medal, Sanitary Institute.

Award of Merit, International Medical & Sanitary Congress.



SCIENTIFIC
WORKS
TRANSLATED

THE
A B C
TRANSLATIONS
BUREAU.

BY
PROFESSIONAL
TRANSLATORS.

66, Holborn Viaduct, London, E.C.

JUSTIN MCCARTHY, Manager.

A TRIUMPH OF PHARMACY.

COD-LIVER OIL RENDERED AGREEABLE AND DOUBLY EFFICACIOUS BY

MACKENZIE'S COMPOUND COD-LIVER OIL EMULSION.

Composed of Select Cod-Liver Oil, Pepsine, and Hypophosphite of Lime, as published.

It can be taken with pleasure by Invalids and Children, and has received the HIGHEST APPROVAL and recommendation of Leading Members of the Medical Profession, after an extensive trial in Private Practice and in the large Medical Hospitals, as a remedy for Consumption, Wasting Diseases, Bronchitis, and Affections of the Chest generally, and also for imparting muscular strength, with a healthy appearance, the great objection to the use of Cod-liver Oil in such cases being entirely overcome. In Bottles at 2s., 3s. 6d., and 6s. each. To be had of all Chemists. Prepared by MACKENZIE & CO., Operative Chemists, 45 Forrest Road, Edinburgh, who originally introduced this preparation.



Liqueur Chateau Selbois.

THE FASHIONABLE TONIC.

TO BE OBTAINED OF THE PROPRIETORS,

E. G. WASTALL & CO., RAMSGATE, DOVER, AND MARGATE.

THE ALUPIKOS BOOT

Is constructed on strictly anatomical principles, being straight on the inner side, thus allowing the great toe to retain its nor-

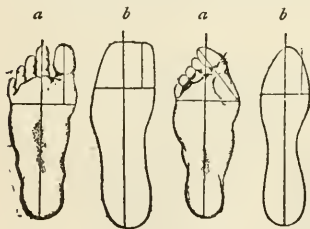


FIG. 1.

FIG. 2.

PARKER & Co. continue to supply all the fashionable shapes, but those who really suffer with their feet will find the ALUPIKOS Boot all that can be desired.

The Sketches a, a, from Professor Flower's 'Fashion in Deformity'.

mal position, parallel to the axis of the foot, as shown in Fig. 1, a, which represents the sole of a naturally formed foot, and b, the sole of the ALUPIKOS Boot.

ALUPIKOS BOOTS

Are to be obtained only at

PARKER'S BOOT & SHOE MANUFACTORY,

145 (late 373) OXFORD STREET, LONDON.

Their Only Address. Established in 1840.

PROFESSOR W. H. FLOWER, LL.D., F.R.S., P.Z.S., &c., in his lecture on 'Fashion in Deformity,' delivered at the Royal Institution of Great Britain, on May 7th, 1880, remarks—

'The great error in all boots and shoes made upon the system now in vogue in all parts of the civilized world lies in their being constructed upon a principle of bilateral symmetry. A straight line drawn along the sole from the middle of the toe to the heel will divide a fashionable boot into two equal and similar parts, a small allowance being made at the middle part or 'waist' for the difference between right and left foot. Whether the toe is made broad or narrow, it is always equally inclined at the sides towards the middle line, whereas in the foot there is no such symmetry.'

REDUCED PRICES. IMPERISHABLE INDICES.

PHENIX CLINICAL THERMOMETERS. Loss of Index impossible; indelible Scale. Sizes—4 in., 5 in., 6 in. Price 7s. 6d., post free.

LENS FRONT PHENIX THERMOMETERS. All the advantages of the foregoing; also a highly magnified Index, and cannot roll. Sizes 4 in. and 6 in. Price 9s., post free.

TEMPERATURE CHART FORMS, size of Visiting List. 6d. per dozen; 2s. book of 50.

HARVEY & REYNOLDS, 13, Briggate, Leeds,

Original Makers of Dr. Clifford Allbutt's Clinical Thermometers.



NORTHGROVE HOUSE, HAWKHURST, KENT AND SUSSEX.

HAWKHURST,

KENT AND SUSSEX.

ESTABLISHED IN 1839.

This Asylum is situate midway between

TUNBRIDGE WELLS AND HASTINGS.

The Government Inspectors are Her Majesty's Commissioners in Lunacy, the Lord Chancellor's Visitors in Lunacy, Four Justices of the Peace, attended by the Medical Inspector of Asylums for the County of Kent, and their Solicitor. Has extensive grounds and excellent stabling. Station, Etchingham, S.E.R. Terms moderate. For particulars apply to

Dr. Wm. MILSTED HARMER, F.R.C.P., etc., etc.,
Physician Superintendent.

BRADY & MARTIN'S NEW ILLUSTRATED CATALOGUE

(COPYRIGHT)

CONTAINS DETAILED LISTS OF
SURGICAL INSTRUMENTS;

PHYSIOLOGICAL APPARATUS, APPLIANCES, & PREPARATIONS;

MICROSCOPES AND MATERIALS FOR HISTOLOGICAL RESEARCH;

CHEMICAL APPARATUS USED BY MEDICAL OFFICERS OF HEALTH.

With nearly 300 Wood Engravings. Supplement containing Notices of newly-introduced Remedies.

Price 2s. 6d., post free.

NEWCASTLE - UPON - TYNE.

SYR. HYPOPHOS. CO., FELLOWS.

CONTAINS **THE ESSENTIAL ELEMENTS** to the Animal Organisation—Potash and Lime

THE OXIDISING AGENTS—Iron and Manganese;

THE TONICS—Quinine and Strychnine;

AND THE VITALISING CONSTITUENT—Phosphorus,

Combined in the form of Syrup, with SLIGHT ALKALINE REACTION.

IT DIFFERS IN EFFECT FROM ALL OTHERS, BEING HIGHLY SUSCEPTIBLE TO OXIDATION UNDER RESPIRATION, pleasant to taste, acceptable to the stomach, and harmless under prolonged use.

IT HAS SUSTAINED A HIGH REPUTATION, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. IS EMPLOYED ALSO IN VARIOUS NERVOUS AND DEBILITATING DISEASES WITH SUCCESS.

ITS CURATIVE PROPERTIES are largely attributable to Stimulant, Tonic, and Nutritive qualities, whereby the various organic functions are recruited.

ITS ACTION IS PROMPT, stimulating the appetite and the digestion; it promotes assimilation, and enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy, and removes depression or melancholy; hence it IS OF GREAT VALUE IN THE TREATMENT OF MENTAL AND NERVOUS AFFECTIONS. From its exerting a double tonic effect, and influencing a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE.—CAUTION.—The success of Fellows' Hypophosphites has prompted unprincipled men to utter substitutes, and a case is reported where the use of an imitation imperilled the life of a patient.

Price (Great Britain) 7s. large, 4s. small.

Mr. FELLOWS has no connection, DIRECTLY OR INDIRECTLY, with any other Preparation.

Prepared, by JAMES I. FELLOWS, Chemist, London; Montreal; New York.

Sole Wholesale Agents—BURROUGHS, WELLCOME, & CO.

LIEBIG COMPANY'S EXTRACT OF MEAT



CAUTION.—Purchasers must insist on having the Liebig **COMPANY'S** Extract. For flavour and clearness pronounced by all competent authorities to be the best.

Invaluable in cases of debility and weak digestion.

N.B.—Genuine **ONLY** with facsimile of Baron Liebig's Signature, in blue ink, across Label.

The Proprietors of the

SANITARY RECORD

AND

LONDON MEDICAL RECORD

Will publish EARLY IN DECEMBER, and present GRATUITOUSLY, to the present Subscribers to those Journals, and all others who may subscribe to them before the *close of the year*, a very complete

DIARY FOR THE YEAR 1883.

The Diary will be of similar size with the two Journals, will be *handsomely bound* in cloth, will be interleaved with blotting-paper in all the necessary parts, and will contain valuable information for the use of the physician and general practitioner, collected from home and foreign sources, statistics, and other matter interesting to the Sanitarian, and those engaged in improving appliances connected with the public health, as well as the usual business addenda generally to be found in such Year Books.

As this is the first time such a work has been presented gratuitously to the subscribers of a Sanitary or Medical Journal, the proprietors trust that this step on their part will be appreciated by their patrons, and tend to aid the increasing interest that is being taken in these popular works.

The Diary will be sold to Non-Subscribers at 3s.

A limited number of Advertisements will be admitted in the Diary, the charge for which will be that of the published tariff of the SANITARY RECORD. Present Advertisers, in either of the Journals, may have their announcements inserted at a price according to the number of insertions for which their order was originally given, viz., if 12 insertions were originally arranged for, they will be inserted in the Diary at the 12 insertion rate and so on.

Applications for *special positions* will be considered in the order in which they are received, and it is respectfully suggested that, as there are but few, early application be made to avoid after disappointment.

All communications on the subject to be addressed to the Publishers,

Messrs. SMITH, ELDER, & Co., 15, Waterloo Place, S.W.

CORBYN, STACEY, & CO.

Melbourne Exhibition,



1880.



TRADE MARK.

Adelaide Exhibition,



1881.

In response to repeated inquiries for preparations more concentrated than the Syrups of the Pharmacopœia, but easily convertible into them, CORBYN, STACEY, & Co. have extended their list of PHARMACEUTICAL and CHEMICAL LIQUORS. It now embraces the following:—

LIQ. CROCI.—1-4.

This is the colouring and flavouring matter of Saffron in a concentrated form.

LIQ. FERRI BROMID.—1-7.

LIQ. FERRI IODID.—1-7.

These solutions are of full strength, and are not liable to alteration by exposure to air and light.

LIQ. FERRI PHOSPH.—1-4.

Free from smell, agreeably acid, and contains the prescribed quantity of iron phosphate in an unoxidised condition.

LIQ. PAPAV. ALB.—1-4.

As an important feature of this liquor, attention is directed to its *stability*, for on prolonged keeping it has remained unchanged, although subjected to conditions which readily induce fermentation in the B.P. Syrup.

LIQ. RHEI.—1-4.

In order that this liquor might be depended upon for being uniform in its action and reliable in its efficacy, great care has been exercised in two directions—viz., the use of sound rhubarb only, and its efficient exhaustion.

LIQ. SENNÆ.—1-4.

Prepared from Alexandrian leaves by a process which reduces to a minimum the irritant and nauseating effects of senna without impairing its medicinal efficacy.

LIQ. TOLUTANUS.—1-4.

This liquor, when added to water or saccharine solutions, forms a clear liquid, and when mixed with syrup in the proportions indicated, produces a preparation more fragrant than the corresponding one of the Pharmacopœia. No spirit is present in the liquor, and it retains the full and fine aroma of the balsam. This latter circumstance suggests for it a preference of a flavouring agent over the B.P. Syrup, in the manufacture of which the more volatile and highly aromatic principles, as the Tolu, are dissipated.

N.B.—One part, by measure, of the above liquors added to the quantity of syrup indicated will form the corresponding preparation of the Pharmacopœia.

Price List, with Order Form and 'Notes on Drugs, Etc.', forwarded on application.

Special Quotations to Hospitals and Public Institutions.

Wholesale & Export Chemists & Druggists.—Analytical Chemists.

300, HIGH HOLBORN, LONDON.

Gold Medal, Paris. Medals, Sydney, Melbourne, Christchurch, N.Z.

FRY'S COCOA EXTRACT.

Guaranteed perfectly Pure Cocoa only.

'There is no nicer or more wholesome preparation of Cocoa.'—*Food, Water, and Air*, edited by Dr. HASSALL.
'Strictly pure, easily assimilated.'—W. W. STODDART, F.I.C., F.C.S., *Analyst for Bristol*.
'Pure Cocoa, a portion of oil extracted.'—CHARLES A. CAMERON, M.D., F.R.C.S.I., *Analyst for Dublin*.

Try also FRY'S CARACAS COCOA.—'A delicious preparation.'

SIXTEEN PRIZE MEDALS AWARDED TO J. S. FRY & SONS

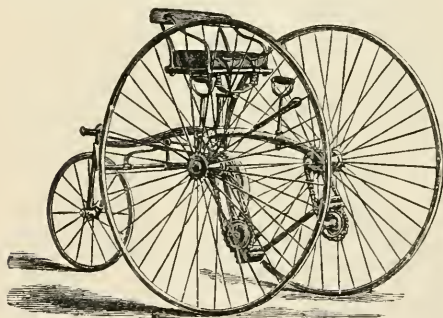
POST FREE.

ANTISEPTIC INHALER, Nickelled
—(Dr. Coghill's Improved System) . 3s. 6d. each
CLINICAL THERMOMETERS—
(Permanent Index) 5s. 6d. "
Ditto Improved) 7s. 6d. "
Ditto Magnified Index . . . 9s. 6d. "
EAR CONVERSATION TUBES—
conical 9s. 6d. "

HYPODERMIC SYRINGE, with
2 needles, and bottle in Leather case 4s. 6d. each
Do., 2 needles in Leather case, superior 7s. 6d. "
Do., 2 " Nickelled case . . . 9s. 6d. "
SPRAY, VULCANITE, with double
bellows 5s. 6d. "
Do., do., long 8s. 6d. "
Do., do., with tongue depressor 10s. 6d. "

MAWSON & SWAN,
WHOLESALE DRUGGISTS, &c.,
20, West Grainger Street, Newcastle-on-Tyne.

WHOLESALE LIST OF DRUGS, CHEMICALS AND SUNDRIES ON APPLICATION.



THE 'CHEYLESMORE'.

Works: { LONDON: 15, HOLBORN VIADUCT, E.C.

The Coventry Machinists Co.
LIMITED.

MAKERS AND INVENTORS OF

THE 'CLUB' BICYCLES & TRICYCLES.

SPECIALITY:—

THE 'CHEYLESMORE' TRICYCLE { DOUBLE DRIVER
BALL BEARINGS,
DOUBLE BRAKE.

Illustrated Catalogues Free.

Published on the 15th of each month, price One Shilling; Annual Subscription,
post free, Ten Shillings.

THE SANITARY RECORD.

A Monthly Journal of Public Health and the Progress of
Sanitary Science.

LONDON:

SMITH, ELDER, & CO, 15, WATERLOO PLACE,
PALL MALL, S.W.

W & A GILBEY'S WINES & SPIRITS

FREE OF DUTY—FOR EXPORTATION

W & A Gilbey have special facilities for carrying on an extensive Foreign Trade, having held for many years in their Excise Bonded Stores, for the purposes of their Home Trade, a Stock of not less than 12,000 Casks of Wines and Spirits, which are equally available for Export. These Stores are by far the largest private Duty Free Warehouse in the World, and are under the supervision of a staff of Excise Officers specially attached to these Warehouses.

W & A Gilbey have already appointed the following Foreign and Colonial Agents:—

EUROPE

ANTWERP	..	H. L. MABB, 18 Rue aux Lits
BOULOGNE	..	W. KNIGHT, 8 Rue de la Lampe
BRUGES	..	F. A. COOK, 40 Rue St. Amand
BRUSSELS	..	J. S. KNEVETT, 2 Rue de Loxum
CALAIS	..	H. R. FROW, 30 Rue Royale
CONSTANTINOPLE	{	STEVENS & Co., 7 Rue de la Quarantaine Galata
CYPRUS	..	GEO. B. LETTS, Limasol
GHEENT	..	E. DE JONGE, 88 Rue des Douze Chambres
GUERNSEY	..	W. JONES, Grand Carrefour
JERSEY	..	C. NAVLOR, 2 Beresford Street, St. Helier's
OSTEND	..	C. CATES, 59 Rue de la Chapelle
PARIS	..	{ W & A GILBEY, 17 Boulevard de la Madeleine and 100 of the principal Grocers in the City

ASIA

AGRA	..	M. MARTINEZ & Co.
BAGHDAD	..	S. M. MINAS & BROTHER
BOMBAY	..	C. H. B. FORBES & Co.
CALCUTTA	..	{ PLANTER'S STORE AND AGENCY COMPANY, Limited, 19 Strand
COLOMBO	..	BRODIE & Co.
DIBRUOGARH	..	PLANTER'S STORE & AGENCY Co., Limited
HIOGO	..	A. C. SIM
HONG KONG	..	LANE CRAWFORD & Co.
MADRAS	..	GORDON, WOODROFFE & Co., 21 North Beach
MANILA	..	SULZER & Co.
MOULMEIN	..	C. ADY
PENANG	..	SCHMIDT, KUSTERMAN & Co.
RANGOON	..	HEGT & Co.
SHANGHAI	..	MACKENZIE & Co.
SINGAPORE	..	GUTHRIE & Co.
YOKOHAMA	..	LANE, CRAWFORD & Co.

AFRICA

CAPE TOWN	..	R. DAVIDSON & Co., Adderley Street
DURBAN	..	GRAZEBROOK, WILLIAMS & Co.
EAST LONDON	..	C. E. NICHOLLS
PHILIPSTOWN	..	J. CHILES
SIERRA LEONE	..	S. BOYLE, Freetown
AMATAVE	..	PORTER, AITKEN & Co.

AMERICA

BELIZE	..	J. GENTLE & Co.
DEMERARA	..	DONALD CURRIE & Co., Georgetown
GUAYAQUIL	..	GEO. CHAMBERS
LIMA	..	F. W. BAYLY & Co., Jesus Nazareno, 31 B
MONTREAL	..	WALLACE C. TROTTER, 30 St. Nicholas St.
SAN FRANCISCO	..	LILIENTHAL & Co., 100 & 102 Front Street
TRINIDAD	..	JAMES TODD & Sons, Port of Spain
VICTORIA	..	H. SAUNDERS, Johnson Street

AUSTRALASIA

ADELAIDE	..	W. MILNE JUNR., Grenfell Street
AUCKLAND	..	A. HEATHER
BRISBANE	..	HENRY BOX & SON
CHRISTCHURCH	..	J. H. SPENCER & Co.
DUNEDIN	..	NEILL BROS.
FREMANTLE	..	LIONEL SAMSON & SON
HOBART TOWN	..	FERGUSON & Co.
LAUNCESTON	..	JOHNSTONE & WILMOT, St. John Street
MARYBORO'	..	CORSER & Co.
MELBOURNE	..	A. D. PRICE, 5 Queen Street
ROCKHAMPTON	..	WALTER REID & Co.
SYDNEY	..	TUCKER & Co., 377 George Street
TOWNSVILLE	..	ROBERT PHILIP
WELLINGTON	..	JOHNSTON & Co.

CHIEF ESTABLISHMENTS IN THE UNITED KINGDOM & FRANCE

ENGLAND	..	PANTHEON, OXFORD STREET, LONDON
IRELAND	..	UPPER SACKVILLE STREET, DUBLIN
SCOTLAND	..	HAYMARKET, WEST END, EDINBURGH
FRANCE	..	CHATEAU LOUDENNE, MÉDOC

Each Cork bears W & A Gilbey's }
Patent Seal thus:—



The Signature is also on the }
side of each Cork thus:—

W & A Gilbey

'THE PERFECT CLINICAL' MAXIMUM THERMOMETER.



FERRIS & CO.'S CORRECTED READABLE INDEX.

FERRIS and COMPANY'S

NEW

'CORRECTED READABLE' CLINICAL THERMOMETER,

With Permanent Index.

The best Thermometer yet introduced. It is accurate. It has a magnified index which can be easily and distinctly read, and it does not get out of order.

The Special and Distinctive feature of 'THE PERFECT CLINICAL' is, that the KEW CORRECTIONS ARE DISTINCTLY MARKED UPON THE STEM OF EVERY THERMOMETER. This improvement at once renders 'THE PERFECT CLINICAL' the most accurate and useful Thermometer for medical purposes.

Price 10s. 6d. each.

To be procured only from

FERRIS, BOORNE, TOWNSEND, & BOUCHER, 4 & 5, UNION STREET, BRISTOL.

CONROY'S MALT COFFEE.

'As a breakfast beverage it is unsurpassed.'—Dr. SANDERSON, M.R.C.S.

'A nourishing and health producing article of diet.'—E. DAVIES, F.C.S., etc.

'Most beneficial in cases of atonic indigestion.'—Dr. ADAM, M.R.C.S. Eng.

'I have frequently recommended CONROY'S MALT COFFEE in cases of weak digestion, invariably with satisfactory results.'—W. BELL, M.R.C.S.

'I consider CONROY'S MALT COFFEE a most excellent combination, rendering it a luxury which should be found in every home.'—A. W. POSTANS, F.C.S.

'CONROY'S MALT COFFEE is a wholesome and nutritive preparation, and one calculated to be of great use in cases of impaired digestion. In my own case I have found it palatable, and certainly an assistant to a weak digestion.'—WM. DONOVAN, L.R.C.P., etc., Medical Officer of Health.

Contains about 75 % PURE COFFEE.

Malted by a Patent Process.

Consists solely of Coffee & Malt.

Flavour equal to finest Coffee.

Doctors recommend it.

Contains all the valuable principles of Malt.

More nutritious than Beer or Porter.

Causes no unpleasant eructations.

Promotes sound and healthy digestion.

Breakfast Beverage par excellence.

It is made in the same way as ordinary Coffee.

Pamphlets containing Testimonials from eminent scientific, medical, and other gentlemen of the highest positions may be had free for gratuitous distribution.

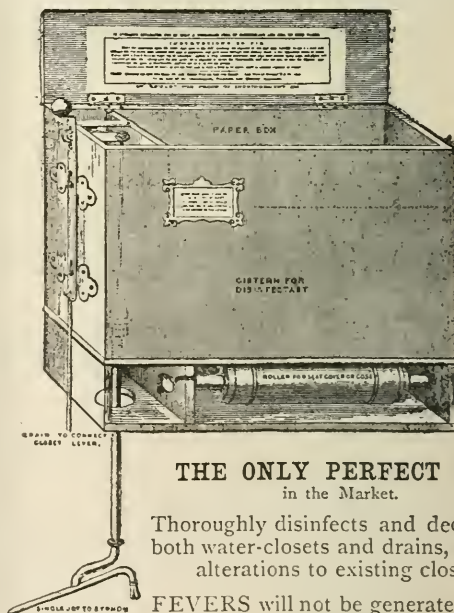
Quotations in quantity on application. In cases of 56 lbs. each, put up only in 7-lb. and 1/2-lb. tins. Each tin is protected by an Excise Stamp under the Regulations of the new Inland Revenue Bill of August 3rd, 1882.

PREPARED ONLY AT THE

MALT COFFEE WORKS,
34, FLEET STREET, LIVERPOOL.

To be obtained from all Druggists, Grocers, and Wholesale from the Sole Proprietors, EVANS, SONS, & CO., 56, Hanover St., Liverpool.

London: Evans, Lescher, and Webb, 60, Bartholomew Close, E.C.



THE
UNIVERSAL DEODORISER.

For Water-Closets & Drains. Cheap, Simple, Efficacious.

THE ONLY PERFECT ONE
in the Market.

Thoroughly disinfects and deodorises both water-closets and drains, without alterations to existing closets.

FEVERS will not be generated where it is in use.

Write for further particulars to

H. RAINES,

SANITARY ENGINEERING WORKS,

WEST END LANE, KILBURN, N.W.

THE LONDON MEDICAL RECORD.

OCTOBER 15, 1882.

CONTENTS.

LEADERS.

DR. NORRIS'S THIRD CORPUSCLE OF THE BLOOD: A CRITICISM AND REFUTATION (Alice M. Hart)	395
LANNELONGUE AND COMBY ON PROLONGED OSTEOMYELITIS ..	400
REPORT ON ANTISEPTIC SURGERY IN GERMANY (F. William Elsner)	402
VON NUSSBAUM ON THE VALUE AND DANGER OF ANTISEPTICS; WITH REMARKS UPON THEIR USE IN MILITARY SURGERY (E. Clifford Beale)	405
SHEARER AND OTHERS ON THE OPIUM QUESTION (William Murrell, M.D.)	407
SEGGIN ON LARGE DOSES (William Murrell, M.D.)	408
KING AND OTHERS ON GRINDELIA ROBUSTA	ib.

THERAPEUTICS & PHARMACOLOGY.

RECENT PAPERS. SELECTED ABSTRACTS: Fox on an Improved Plan of using Chrysophanic Acid externally.—Jardine on Koroniko, a New Remedy for Chronic Dysentery.—Wormley on Gelsemic Acid.—Suppositories for Hemorrhoids.—Styptic and Antiseptic Cotton.—Henry on the Use of Iodoform in Enlarged and Ulcerated Tonsils.—Formulæ.—Harnack on Carlsbad Salt.—Limousin on a New Method of Preparing Blisters.—Schiffer on Extract of Guachamacá.—Pavesi on Saccharate of Coffee.—Cullimore on Aconite for Hydrophobia.—Hutchinson on Iodine in Erysipelas.—Edge on Herpes Zoster occurring during Arsenical Treatment.—Barton on Sulphide of Calcium in Cancer.—Little on Medical Rubbing.—Thompson on a New Hæmostatic.—Starting on Chaulmoogra Oil in Leprosy.—Dick on Tape-worm.—Scriven on the Treatment of Dysentery (Richard Neale, M.D.)—Senator on the Therapeutic Use of Soft Soap.—Albertoni on the Influence of Certain Drugs on the Irritability of the Cerebrum, with Remarks on the Treatment of Epilepsy.—Fraenkel on the Treatment of Catarrhal Angina (James Anderson, M.D.)	409
---	-----

MEDICINE.

RECENT PAPERS. SELECTED ABSTRACTS: Neale on Scurvy.—Henderson on Perforating Duodenal Ulcer.—Millican and others on the Causes of Acute Tonsillitis.—Bull on Abscess of the Spleen Perforating the Stomach (Richard Neale, M.D.)—Ott on a Sign of Tubercular Meningitis.—Remak on the Pathology and Treatment of Localised Muscular Spasm.—Fränkel on the Connection between Nervous Asthma and Diseases of the Nose (James Anderson, M.D.)	414
---	-----

SURGERY.

RECENT PAPERS. SELECTED ABSTRACTS: Lesser on the Operative Treatment of Caseating Glandular Swellings.—Pilcher on the Ligation of Large Venous Trunks.—Kinloch on Aneurism of the Posterior Tibial Artery.—Bieckel on the Operative Treatment of Genu Valgum.—Grünberg on a Case of Obturator Hernia (W. Johnson Smith).—Murdoch on the Removal of Plaster-of-Paris Bandages.—Levis and Morton on the Treatment of Transverse Fracture of the Patella.—Weist on Foreign Bodies in the Air-Passages.—Lidell on Fractures of the Skull, restricted to the Inner Table.—Johnson on Skin-grafting.—Brichetti on the Indications for Nephrectomy.—Vizioli and Butera on the Value of Cold in Aneurism (Littor Forbes).—Nicolaysen on Resection of the Polorus for Cancer (E. Clifford Beale)	415
---	-----

OBSTETRICS & GYNÆCOLOGY.

RECENT PAPERS. SELECTED ABSTRACTS: Danillo on the Frequency of Disease of the Sexual Organs in Insane Women.—Fissiaux on the Treatment of Urethritis in the Female.—Lutaud on Membranous Dysmenorrhœa.—Macan on the Rational Treatment of Displacements of the Uterus.—Nicolini and Savage on Successful Cases of Porro's Operation.—Sloan on Oil of Eucalyptus in Midwifery Practice (Francourt Barnes, M.D.).—Tchudovsky on Decapitation.—Schramm on a Case of Nineteen Months' Retention of Fœtal Bones in the Uterus (V. Idelson, M.D.)	420
---	-----

ANATOMY.

RECENT PAPERS. SELECTED ABSTRACTS: Rein on the Fundamental Nervous Plexus of the Uterus (W. Vignal).—Ayres on the Development of the Cornea.—Wolf on the Nerves of the Cornea; and on Free Endings of Sensory Nerves.—Lucas on Hereditary Tendency to the Production of Supernumerary Digits (W. Johnson Smith)	422
---	-----

DISEASES OF THE THROAT.

RECENT PAPERS. SELECTED ABSTRACTS: Schiffer on a Tuberculous Cavity in the Larynx in a Patient the Subject of Cancer of the Stomach.—Tordoux on a Case of Catarrhal Croup.—Massucci on Fracture of the Cricoid Cartilage: Recovery.—Cozzolino on the Transmissibility of Diphtheria	
---	--

from the Fowl to Man.—Ward on Paresis of the Vocal Cords.—Whipham on a Case of Aneurism of the Aorta, causing Bilateral Paralysis of the Vocal Cords.—Lefferts on a New Classification of the Motor Affections of the Larynx.—Porter on Obstruction of the Nares as a Cause of Asthma.—Rumbold on the Relation of Nasal Catarrh and Nasal Polypi to Asthmatic Symptoms.—Walb on the Etiology of Nasal Elenorrhœa.—Votolini on Operations on Nasal Polypi by means of the Sponge.—Schäffer on Polypi of the Nose.—Gentilhomme on the Employment of Sulphate of Atropine in the Treatment of Coryza.—Bennett on Laryngeal Fistula, probably of Lupoid Origin (W. J. Walsham).—Maurer on Extirpation of the Larynx (W. Johnson Smith)	423
--	-----

OPHTHALMOLOGY.

RECENT PAPERS. SELECTED ABSTRACTS: Litten on Alterations in the Fundus Oculi in Certain General Affections (James Anderson, M.D.).—Galezowski on the Treatment of Parenchymatous Xerophthalmia.—Kronhjelm on Central Tobaccamblyopia.—Barraquer on the Treatment of Dacryocystitis.—Kubli on Amyloid Tumours of the Conjunctiva.—Adamuk on Tumours of the Eye.—Ayres on Sympathetic Inflammation.—Knapp on Tolerant of Foreign Bodies in the Eye.—Chisholm on an Obscure Case Accompanying Optic Neuritis.—Noyes on Hemi-achromatopsia (Littor Forbes)	426
--	-----

TOXICOLOGY.

RECENT PAPERS. SELECTED ABSTRACTS: Hubbard on Arsenic.—Crookes on Lead-Poisoning by Water-Supply.—Ponfick on Fungi.—Shaw on Poisoning by Daphne Mezereum.—Medical Examiners v. Coroners.—Survivorship (Thos. Stevenson, M.D.)	430
---	-----

REVIEWS.

DR. A. VERNEUIL. Surgical Memoirs (G. H. Makins)	432
J. MILNER FOTHERGILL, M.D. Chronic Bronchitis. Aids to Diagnosis (James F. Goodhart, M.D.)	433
WILLIAM STOKES, M.D., D.C.L., F.R.S., etc. A Treatise on the Diagnosis and Treatment of Diseases of the Chest (James F. Goodhart, M.D.)	434
CHARLES H. RALFE, M.D. On the Morbid Conditions of the Urine Dependent upon Derangements of Digestion (James F. Goodhart, M.D.)	ib.
DR. ROBERT CORY & MR. FRANCIS MASON. St. Thomas's Hospital Reports (James F. Goodhart, M.D.)	ib.
DR. THEODORE BILLROTH. Clinical Surgery (G. H. Makins)	ib.
BYRON BRANWELL, M.D., F.R.C.P. The Diseases of the Spinal Cord (Julius Althaus, M.D.)	435
HENRI LOLEIR. Clinical and Anatomic-Pathological Researches on Cutaneous Affections of Nerve-Origin (G. Thin, M.D.)	436
HENRY W. WILLIAMS, A.M., M.D. The Diagnosis and Treatment of the Diseases of the Eye (W. A. Brailey, M.D.)	437

NEW INVENTIONS.

A New Form of Catheter for Washing Out the Bladder and Urethra.—Adepsine and Adepsine Oil	ib.
MISCELLANY	438

(For Index to Advertisements see page iii.)

NOTICE.

THE LONDON MEDICAL RECORD is published in Monthly Parts, and may be ordered direct from the Publishers. Annual Subscription, 13s.; postage paid, 19s. 6d.
Reading Covers to hold THE LONDON MEDICAL RECORD have been prepared, and may be had direct from the Publishers or through any Bookseller, price 2s. 6d. each.
Foreign Books for review in this Journal may be sent addressed to the EDITOR, care of Messrs. DULAU & Co., London; and through their Agents:—Paris: Mr. G. BOSSANGE, Rue Quatre-Septembre—Leipzig: Mr. K. F. KOEHLER—Florence: Mr. E. LOESCHER—Brussels: Mr. C. MUQUARDT.
The Seventh Volume of the LONDON MEDICAL RECORD is now ready, price 10s. 6d. Cloth Cases for binding the Numbers for each year Home and Foreign Agents for THE LONDON MEDICAL RECORD:—Edinburgh: MACLACHLAN & STEWART—Amsterdam: W. H. KIRKWER—Bombay: THACKER, VINING, & Co.—Calcutta: THACKER, SINKE, & Co.—Melbourne: GEORGE ROBERTSON—Montreal: W. DAWSON & Co.—New York: G. PUTNAM'S SONS.—Paris: JOHN ARTHUR & Co., 10, Rue Castiglione.
may be had for 1s. 6d. each.
Advertisements should be sent to the Office, 15 Waterloo Place, S.W., on or before the 10th of each month.

SAVORY AND MOORE'S SPECIALITIES.

MEDICATED GELATINE (Patent).

A portable, elegant, and efficient vehicle for the Administration and Use of Important Medicines. Specially adapted to the requirements of Medical Practitioners in the Country and the Colonies.

The universal and increasing demand for this novel and effectual method of carrying, in the smallest possible compass, a supply of the most important medicaments to be found in the surgery, has induced Messrs. SAVORY & MOORE to effect a

Reduction in the Price of Gelatine Lamels for Internal Use,

which are now sold in Sheets of *Twenty-four Lamels each* at 1s. 3d. per Sheet, Quinine and Emetia Lamels excepted.

Suspended in a little water, the Lamels are readily taken, and without the slightest taste.

A small POCKET LETTER CASE will contain an ample supply (several hundred doses) of the Lamels of the most varied character and description.

DISCS FOR HYPODERMIC INJECTIONS.

Consist of small (SQUARE) discs impregnated with a definite proportion of alkaloids, etc. *Issued in Tubes of 25 Discs, price 2s. 6d.*

The chief feature of these Discs is their instant solubility, by which hypodermic solutions can be immediately obtained of uniform and reliable strength; they keep good for an unlimited period in their dry state, and are extremely portable.

DISCS FOR OPHTHALMIC USE.

Comprise minute (ROUND) discs impregnated with a definite proportion of alkaloids, etc. *Issued in Tubes of 100 Discs, price 2s. 6d.*

'The Discs have the advantage of slowly softening and dissolving. The medicament gradually dissolves out, and is absorbed. Hence much smaller doses serve to produce a marked effect.'

BLISTERING GELATINE, OR LAMELLÆ CANTHARIDIS.

The most Elegant, Efficacious, and Convenient Mode of Blistering. TINS, 1s. 3d.



USED IN THE
ROYAL NURSERIES.

Malted & Cooked

Ready for use without
Boiling or Straining.

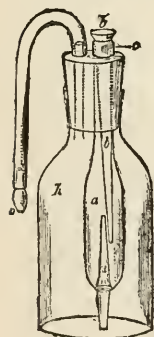
Tins, 1s., 2s., 5s., and 10s.

The Only Food ^{prepared expressly} for Infants

A combination, the result of the latest physiological improvements upon Liebig's original formula. The granules of the Farina are thoroughly broken and cooked, and always ready for conversion into food. It is also associated with *fresh malt diastase* of known digestive activity, and other valuable nutrients in due proportions. **This Food is therefore really 'Self-digesting'** in the infantile stomach, and conveys nourishment for every part of the human frame.

Possesses every requirement necessary for Children brought up wholly or partially by hand.

Dr. FELTON'S INHALER (Patent)



For the Inhalation of
Chloride of Ammonium

AND

Various Medicated Vapours,

For use in the Treatment of

Hay Fever, Asthma, Bronchial and
Catarrhal Affections, etc.

Occupies the space of an ordinary 3-oz. Bottle.

PRICE:—

Inhaler, 4s. 6d.; with Stopped Bottles, Acid and
Ammonia, packed in box complete, 6s. 3d.

Sole Agents for United Kingdom—

SAVORY AND MOORE.

Descriptive Pamphlet on application.

SAVORY & MOORE'S

PATENT VAPORIZER.



For Disinfecting the Air and Furniture
of Rooms, Bedding, Clothes, etc., in
SMALL-POX, FEVERS, CHOLERA, ETC.,

ALSO,

For all Purposes of Deodorization
and Diffusion of Perfumes.

Aromatised (or Perfumed) Carbolic Acid

Will be found to do away with much of
the objectionable smell of the ordinary
Carbolic Acid, while the Disinfectant pro-
perties remained unimpaired.

SAVORY & MOORE, 143, NEW BOND STREET, LONDON, W.

AND SOLD BY CHEMISTS EVERYWHERE.

The London Medical Record.

The Publishers of the LONDON MEDICAL RECORD invite offers of back volumes or sets of this periodical.

DR. NORRIS'S THIRD CORPUSCLE OF THE BLOOD: A CRITICISM AND REFUTATION.*

IN a recently published monograph, Dr. Norris develops his theories regarding the morphology of the third or invisible corpuscle of the blood which he claims to have discovered, and describes anew in further detail his methods of research, and the appearances on which he founds his views. The book is profusely illustrated by 196 photographs of great excellence, and Dr. Norris's views and the deductions drawn from them are set forth with perspicuity.

The first part of the book consists of a republication of his original essay on the discovery of the third or invisible corpuscle, which paper was read at the Birmingham Philosophical Society in November 1878, and published immediately afterwards. This chapter, though essentially a republication, differs, notwithstanding, in many important respects from the original paper; the alterations being, as I shall hereafter show, apparently in a large measure due to certain criticisms which I ventured to publish in this journal in January 1880, after repeating parts of Dr. Norris's research. No explanation, however, either in foot-note or in preface, is given of the alterations, nor of the changes in the author's views which they indicate; an omission which is the more remarkable, as part of the book professes to reply to my objections, without mentioning that the present text has been, in republication, modified in many important respects to parry them. This first chapter is followed by a long reply to the criticisms of his methods and results which I published in this journal in 1879. Dr. Norris then proceeds to give an account of further researches, to describe the best methods of staining the invisible corpuscle, and to endeavour to show the identity between his third corpuscle and the hæmatoblasts of Hayem, and the *small plates* of Bizzozero; and, subsequently, in elaborate chapters on leukaemia and anemia, he seeks to demonstrate that his theory of blood-formation gives a sufficient explanation of the pathology and symptoms of these diseases.

Since the first publication of his research, Dr. Norris has seen reason to entirely change his views regarding the nature of the white blood-corpuscle. In his first paper, he stated that he was unable by any legitimate means to discover the presence of a nucleus in the white corpuscle or in the lymph and splenic corpuscle, and that he considered the appearance of nucleation to be entirely due either to reagents or to faults in manipulation. He taught then that these corpuscles consisted of a single sac or of an aggregation of sacs, which sacs often ruptured, as the result of manipulation, and discharged their fluid contents. This fluid then ranged itself round the shrunken sac-wall, and thus gave the false appearance of nucle-

ation. It was pointed out in my criticism, that Professor Ranvier's observation of the division of the nucleus in the living white blood-corpuscles of the axolotl militated against this theory; subsequent observations have, however, led Dr. Norris to see the error of his first opinion, and to accept the usual teaching regarding the nucleation of the white and the lymph corpuscle; and where in the original the word cavity was used when speaking of these cells, the word nucleus is now substituted.

Dr. Norris's present views may be briefly stated to be as follows. He holds that the small uninucleated corpuscles, which are seen in such abundance in the lymph- and blood-forming organs, belong to the first stage in the formation of red blood-corpuscles, and that the nuclei of these bodies, while remaining in the gland or in their passage through the thoracic duct, free themselves of the surrounding close-fitting granular cell-wall. This is accomplished by a kind of peeling off of the outer covering; and many photographs of the process are given. What becomes of the *débris* of the discarded cell-walls, he does not explain. Thus, it will be seen, Dr. Norris describes two forms of lymph-corpuscles, the primary or uninucleated corpuscle, and what he calls the *advanced lymph-disc*, which is actually the free naked nucleus of the lymph-cell. This nucleus he describes as transparent, colorless, and homogeneous, discoid in shape, and in size somewhat smaller than the normal red disc. Advanced lymph-discs may be, he states, found in the lymph-glands; but they are present in larger numbers in the thoracic duct, whence they are poured into the blood-current, together with the primary nucleated cells. The latter are to be recognised in the blood, as uninucleated white blood-corpuscles. The advanced lymph-disc is, however, incapable of being seen in the blood, owing to its colorlessness and transparency, and to it possessing the same refractive index as the liquor sanguinis. These invisible corpuscles gradually become colored by endogenous secretion of hæmoglobin, until they attain the color and appearance of the normal red corpuscle. The biconcave form is due, he considers, to physical causes, and is brought about as soon as the lymph-discs are poured into the liquor sanguinis. The granular and nucleated lymph-corpuscle develops, by division of its nuclei, into the multinucleated white corpuscle. These nuclei may, he assumes, become free, pass into the invisible condition, and finally develop into red corpuscles; though, on this much-disputed and long-investigated point, his researches throw no fresh light and afford no new evidence. He simply asserts the fact as one proved. In his early paper, he declared that the objections to this view were to his mind unanswerable. As the invisible corpuscles have a great tendency to break down, and to adhere in small granules to the surface of the glass, from which centres processes of fibrin may be seen to issue, Dr. Norris asserts that Hayem has mistaken the nature of these fragmentary granules, and described them as his 'hæmatoblasts'. With regard to the part played by the red nucleated cells of the bone-marrow in blood-formation, Dr. Norris holds that the red disc is the ultimate growth of the nucleolus of a nucleated cell, which has become free by the consecutive disintegration of the cell-wall, the nucleus, and the envelope of the nucleolus, which process, he states, he has been able to follow; and he gives photographs purporting to represent these bodies in the process of gradually freeing themselves of their successive envelopes. Many of these cells become

* *The Physiology and Pathology of the Blood.* By Richard Norris, M.D. London: Smith, Elder & Co. 1882.

colored in the bone-marrow, though a large number, he contends, pass over into the blood-current in the invisible state. As to Professor Rindfleisch's theory of the emigration of the nucleus from the red nucleated cell, the red disc being formed by a remoulding of the body left behind, he suggests that the appearances on which that theory is based are probably due to accident in the preparation. Of the large amount of inert *débris* left behind by the process of disintegration described by Dr. Norris, he gives no account, nor of the means by which it may be absorbed. He allows, however, that, besides the method already described, the red discs of the human embryo and some adult lower animals may be also produced by atrophy and absorption of the nucleus of the red nucleated cells of the bone-marrow *in situ*.

Leukæmia Dr. Norris considers 'to be due to a hyperplasia of the lymphoid organs, inconsistent with that lengthened stay of the products in these organs which is necessary to the decapsulation of the primary lymph-disc, and the setting free of its nucleus as the advanced lymph-disc.' Nucleated corpuscles thus pass in great numbers into the blood, before they have had time to be changed into invisible discs. Anæmia he considers to be due to a diminution of the vitality of the lymph-discs, which leads to a reduction of their life-period, and therefore to decrease of their numbers; and, as hæmoglobin is gradually obtained in the blood in equal quantities in equal times, a deficiency of hæmoglobin in the corpuscles results. This theory does not, however—it may be noted in passing—explain those cases of pernicious anæmia in which the number of red corpuscles is enormously decreased, but the proportion of hæmoglobin per corpuscle is above the average.

The *advanced lymph-disc* of the lymph, and the invisible or slightly colored corpuscle of the blood, are, according to Dr. Norris, the fibrin-factors, and produce fibrin either by spreading into fine films, or by melting down into plasmin pools, or, in the more usual manner, by sending out fine fibrils from, and of, their own substance. The blood-corpuscles of the ovipara are, he argues, identical in their genesis and changes with those of the mammal, being divisible in the same way into invisible or *fugitive* and colored or *permanent* groups; and he states that the colorless protoplasm of the young nucleated cells is the part which breaks down into fibrin.

Such, briefly, is Dr. Norris's theory of blood-formation. The theory is in itself complete, and assumes to explain some of the darkest secrets of physiology. It is with genuine regret, therefore, that, after long and patient investigation of the subject, I am forced to the conclusion that it is based upon illusions engendered by Dr. Norris's peculiar methods of working. The whole theory rests upon the basis of the demonstration of the existence of invisible corpuscles as normal constituents of the blood. If it be found that these are not normally present in the blood, but are merely produced and made apparent by his methods of treatment, whilst on the other hand they cannot be discovered by the most diligent investigation, when methods conservative of the blood-corpuscles are used, then Dr. Norris's whole theory falls to the ground. Delicate and unstable as are the blood-corpuscles, so careful and exact must be the conditions under which they are examined after quitting the vessels, so guarded and cautious must be the deductions drawn from appearances presented under the microscope; in fact,

it might be urged with justice that only observations made on the living corpuscles, circulating in the vessels of the living animal, are finally trustworthy. Failing this, means should always be taken to preserve the corpuscles from change, or to ascertain beyond doubt that the appearances seen and described are not due either to reagents, to abnormal conditions, or to *post mortem* changes. Many and alluring have been the theories about the blood, advanced and supported on data that were vitiated by fallacies arising from some one or other of these causes.

Some readers of the LONDON MEDICAL RECORD may remember that, in the article which I published in 1880,* after a laboratory research on Dr. Norris's methods, I pointed out that his methods of demonstrating the existence of the invisible corpuscle were open to the fatal objection of themselves creating the appearances he described as normally existing. Dr. Norris has honored me by a long reply to my criticism in his book, and by making important alterations in his original text, in deference to many of my objections. I have therefore submitted the subject to a still further practical investigation, repeating the experiments which Dr. Norris declares to be crucial, and am thereby led to believe that the following remarks may throw further light on the subject.

As a source of fallacy in Dr. Norris's method of packing, I pointed out in my paper 'that the corpuscles are here subjected to an extreme degree of pressure. They are drawn by the force of capillary attraction between two glass surfaces bound firmly together, until they reach a spot which they cannot pass by reason of the close contact of the two glasses. They, therefore, become wedged in and are subjected to the action of two forces, the capillary attraction which is drawing the liquor sanguinis from around them, and the pressure, above and below, of the glasses between which they are tightly wedged.' Dr. Norris has, evidently, seen the full fatal force of this objection, and parries it rather than meets it. He states that (p. 49) he prefers to regard the condition as one of 'coercion of form', induced by the proximity of the glasses, which coercion of form causes the corpuscles to become flattened, thinned, and paler. To deny pressure, but to admit physical coercion of form is a type of argument which, I believe, is sometimes characterised as feminine, which whilst denying, it gives consent. The distinction made can scarcely be allowed to constitute a difference. In the familiar example of a boy's nose flattened against a pastry-cook's window, it is obviously immaterial whether it be said to be subjected to pressure, or to be in a condition of coercion of form. The simple physical fact is unaltered. In the first publication of Dr. Norris's paper, in 1878, he states that 'the conjecture, that invisible corpuscles are red discs which have lost their color, as a preliminary step to their dissolution, has no facts to lend it support.' I subsequently pointed out, in my paper, that, by the packing method, all the corpuscles become paler as they pass towards the point of contact in the glasses where the iridescent lines, called the rings of Newton, are produced, in consequence of loss of hæmoglobin, which substance may be found again, by means of the micro-spectroscope, in the serum filtered off on the other side of the rings. Dr. Norris replies in the present monograph, that he knows 'of no method of decolorising a blood corpuscle, except that

* LONDON MEDICAL RECORD, January 15th, 1880.

of solution of its hæmoglobin'; and that 'supposing pressure to be present, it could never discharge the color from such bodies as the mammal blood-corpuscle,' the color being in chemical combination (p. 47). On a later page, however (p. 52), it will appear that subsequent observations have obliged him to change his opinion; for he states that 'the question of the effects of direct pressure upon the mammal corpuscle has been carefully investigated, with the result of showing that corpuscles can be made in this way to give up some of their hæmoglobin, as evidenced by their becoming paler, and by the liquid becoming stained.' It is curious that statements so contrary and mutually destructive should be allowed to stand in the same volume. Elsewhere, however, he implicitly admits the correctness of my observations, and virtually accepts my explanation, in the following words (p. 49): 'It is quite true that as the corpuscles pass within the outermost system of rings they become paler, and this because they become thinner, a fact which is known by the increase of their diameter. As the liquor sanguinis becomes more charged with hæmoglobin derived from the mass of corpuscles, and not from one more than another, the flattened corpuscles will become more and more obscured, indistinct, and faint, because the contrast between them and their surroundings becomes less and less. Under such circumstances they may become barely visible, and, perhaps, quite invisible; and this not because they have become colorless, but because the liquor sanguinis has become colored up to a like intensity with themselves.' And again (p. 51): 'This faintness of the corpuscles is due to two causes. Firstly, they are flattened, owing to the proximity of the glasses; and, secondly, the contrast between them and the liquor sanguinis is diminished, owing to the colorisation of the latter.' The two facts which I pointed out in my criticism, (1) that in the packing method the corpuscles are subjected to undue pressure, and (2) that hence they lose their hæmoglobin, are here, it will be observed, admitted by Dr. Norris. Another theory is, however, introduced to explain the tinting of the liquor sanguinis, in such a manner as may reconcile it to Dr. Norris's views of the origin of the colorless corpuscle. He contends that all red corpuscles lose hæmoglobin in an equal ratio, and that there is no difference in quality between these bodies. That this is not the case is, however, a matter of actual observation; and the difference of the corpuscles in stability, and in their power of resistance, may be demonstrated by very simple methods. I have repeatedly found that, if red blood-corpuscles be subjected to the action either of a saturated solution of common salt, a 33 per cent. solution of alcohol, or an aqueous solution of eosin, a certain number of the corpuscles become colorless at once, while others resist and preserve their normal form and color; but the longer the corpuscles are kept in contact with the reagent, the greater the number that fall under its influence; thus showing that there is a marked difference in the power of resistance between the corpuscles. This is not difficult to understand, when we remember that these bodies are constantly being renewed, and are subject to decay and death. In fact, on Dr. Norris's own hypothesis, and on his admission that all the corpuscles part, when subjected to the pressure of the packing glasses, with an equal quantity of hæmoglobin, it is obvious that, by this process, some among them must become in-

visible; for, in a later chapter, he gives elaborate calculations to show that the invisible corpuscle becomes visible by forming equal quantities of hæmoglobin in equal periods of time, the life-history of a red corpuscle extending, on an average, over about three weeks. He teaches that the younger a corpuscle is, the more unstable is its condition; hence it is obvious that if, as I contend, and as Dr. Norris admits, hæmoglobin is extracted from the red corpuscles by the withdrawal of the serum under pressure, numbers of the corpuscles, which, according to Dr. Norris, have only obtained, as yet, a small amount of color, would become invisible in the process. Whether these corpuscles which become invisible are young and immature bodies, as he asserts, or degenerate corpuscles with a low power of resistance, as I am inclined to believe, is another question. I may mention, as a point which throws some light on the origin of the invisible corpuscle, that I have found that the power of resistance of the red corpuscles is much decreased in organic diseases, such as cancer or phthisis; and that the blood-corpuscles lose their hæmoglobin and become invisible, when acted upon by reagents, much more rapidly in these cases than in those of the blood of healthy persons. It is easily understood how, in respect to this unequal resistance, the least resistant of the corpuscles lose all their hæmoglobin, and become invisible when subjected to the forces at work in the method of packing. In fact, I have, as I stated in my paper, frequently observed this change take place under my own eyes. The corpuscles being packed in single layers, I have seen some among them swell, become paler, and finally invisible, leaving the characteristic colorless spaces photographed by Dr. Norris, while others retained their normal tint for an indefinite time. This fact seems to me conclusive against Dr. Norris's explanation, that the serum becomes tinted by all the corpuscles losing hæmoglobin in an equal ratio. It also indicates that the attempt to demonstrate the existence of the invisible corpuscle as a normal constituent of the blood, by the method of packing, is delusive and untrustworthy.

One of the methods recommended by Dr. Norris to render the invisible corpuscle apparent, is to change the refractive index of the serum by adding a saturated solution of common salt to the blood immediately it is drawn. Certainly the number of invisible corpuscles rendered visible by this simple expedient is quite remarkable. In my paper, however, I pointed out that the effect of a saturated solution of common salt on the red corpuscles is to cause about one-third of their number to discharge their hæmoglobin and to become transparent, and that these corpuscles, decolorised by the action of the salt, had been misinterpreted by Dr. Norris, and described by him as normally existing in the blood. On referring to my notes on the experiments of control which I carried out in October and November of 1879, before reviewing Dr. Norris's work, I find a record of exact observations on the action of salt. Enumerations of the red corpuscles were made by means of Gowers' hæmacytometer and Potain's mixer, after mixing the blood with the preservative 5 per cent. solution of sodium sulphate, and at the same sitting mixing blood of the same subject with a saturated solution of sodium chloride, and the results were compared. In one experiment, the mean counting gave 4,920,000 corpuscles per cubic millimetre with the 5 per cent. solution of sodium sulphate, and 3,260,000 with the saturated solution of sodium chloride:

1,660,000 corpuscles had therefore been rendered invisible by the action of the sodium chloride. I also found that, if I fixed the ruled cell, and counted the corpuscles resting on a few squares, and then left the slide untouched for several hours, the action of the sodium chloride on the corpuscles was progressive, a greater number of corpuscles falling under its influence and becoming invisible; while in identical conditions the corpuscles might be kept almost indefinitely in the 5 per cent. solution of sodium sulphate without change. To my objection to the use of a saturated solution of common salt, Dr. Norris replies in the present monograph (p. 62) that it was very well known to him that a certain number of the red discs disappeared in a concentrated saline solution; but he contends that its power of dissolving hæmoglobin is limited and soon satisfied, and that its action is identical on *all* the corpuscles alike, from all of which it extracts a minute quantity of coloring matter. It, nevertheless, seemed to him, he says, a matter of small importance, that, after having satisfied himself of the existence of corpuscles that could not be seen, a few more should be added to the invisible set by the action of the salt. Dr. Norris forgets, however, that he has to satisfy other observers besides himself, and that, when it is a question of the actual existence of the invisible corpuscle, it can scarcely be considered a matter of small importance that 1,660,000 out of 4,920,000 should be artificially converted from the visible to the invisible condition by the very agent by which he seeks to demonstrate it as a normal element of the blood. To eliminate all sources of error is avowedly the first step in a scientific investigation; and that so great a source of error should have escaped Dr. Norris is a matter of some surprise. This solvent action of common salt seems, however, to have been hardly as present to the mind of Dr. Norris as he now supposes, since in the first publication of his paper (that is, the paper which I criticised), he recommended saturated solution of common salt as the basis of the staining fluids to be used, and further (p. 14) in the same paper, he directed that '*in all cases*' in which blood is obtained for examination, it should be passed at once into an ammoniated solution of carmine, in a saturated solution of common salt, with the object of both staining and preserving the invisible corpuscle, and the formula for this staining fluid is given in full. On this plainly stated direction I commented, saying, 'It would be interesting to learn from Dr. Norris if all the photographs in his paper were taken from specimens of blood which had first been subjected to the action of the saturated salt solution.' Dr. Norris now expresses great astonishment at this 'remarkable statement' of mine; and, indeed, on referring to the present republication of his paper, in the first chapter of the monograph, no warranty can be certainly found in the existing text for my inference; for Dr. Norris has carefully expunged the words, 'in all cases', which stand in the original, and also the formula for the staining fluid. In fact, in all the directions given in the present volume for staining, where the words 'saturated solution' stand in the original, 'three quarters per cent. solution' is now substituted; so that, on reading Dr. Norris's republished paper, often altered in an exactly opposite sense to the original, without explanation in footnote or preface, and his reply to my criticism on the original text, published now for the first time in the same volume with the altered text, it is sometimes difficult to discover to what my strictures allude.

To the method of 'isolation', I objected in my early paper that the effect of the sudden withdrawal of the serum on the more unstable of the corpuscles had not been sufficiently taken into consideration; and I find that in the present volume Dr. Norris himself allows that the more unstable corpuscles can ill bear the withdrawal of the serum, and also gives force to my view in the words: 'A structure is only the same structure so long as it remains in the same surroundings'.

Thus far, then, Dr. Norris has in no way improved the scientific acceptability of his views, or shaken the adverse conclusion to which I was led by repeating his experiments; namely, that the invisible corpuscle is the artificial production of his methods, and is nothing else than a red corpuscle decolorised out of the body, and not an actual living corpuscle of the blood. He urges, however, that I have not fully repeated all his methods, and considers that some are quite unobjectionable, and are not liable to the sources of error already indicated. Those on which he specially relies are the preservative action (1) of absolute alcohol; (2) of a 2 per cent. solution of osmic acid; (3) of a .75 per cent. solution of sodium chloride; and (4) of a soluble colloid; and (5) the demonstration of the existence of the invisible corpuscle in fresh blood by impact and packing, when it is run under thin flexible mica covers. I will examine these *seriatim*.

As to the first, Dr. Norris directs that with glasses prepared for the isolation method, absolute alcohol be first run between the cover-glass and slide, so that the whole of the space may be filled; a drop of blood placed then on the edge rapidly insinuates itself, and mixes with the alcohol. On now raising the cover-glass, groups of colored corpuscles are found adhering to the surfaces of the glass. This is quite true. Unfortunately, however, Dr. Norris has failed previously to note the action of absolute alcohol on the corpuscles. Its action can be observed with great facility by his ingenious method of packing. Let blood be run under glasses prepared for packing, and time given to the corpuscles to pack; then let absolute alcohol be introduced on the opposite side of the rings of Newton. The fluid enters by capillarity, and its action on the stationary corpuscles can be easily watched. When it reaches the corpuscles in an undiluted condition, its first effect is to instantly disintegrate them into minute granules. As, however, it advances and becomes diluted by the serum, it acts upon the corpuscles less violently, but in the same way as does alcohol diluted with water, causing them to discharge their hæmoglobin and to become transparent. This action of dilute alcohol on the red corpuscles is well known. The same effect can be watched when absolute alcohol is introduced first under the isolation glasses, as directed by Dr. Norris.

Secondly, Dr. Norris directs that a two per cent. solution of osmic acid be used in the same way, and gives an impressive photograph of the result obtained by himself by this means. A two per cent. solution of osmic acid is generally credited with the power of instantaneously fixing albuminoid bodies, and rendering them no longer subject to change. This it undoubtedly does; but to obtain the result it is necessary that the solution of osmic acid remain of the same strength, and that it be brought into immediate contact with the corpuscles. If, as may be shown by the packing method, the osmic acid becomes diluted by the serum, it ceases to exercise its peculiar fixing action on the corpuscles. Dr. Norris,

quoting in his book from a private communication of mine to him in 1879, and not from my paper, refers to an experiment with osmic acid, which I considered crucial and adverse to his views. I stated to him that, if the blood immediately on being drawn were mixed with a 2 per cent. solution of osmic acid, and if this mixture were subsequently diluted with a quantity of distilled water, so as to change the refractive index, while the corpuscles were at the same time preserved by the action of the osmic acid, the invisible corpuscle could not be found. Dr. Norris replies that he has repeated this experiment, and has arrived at an exactly opposite result; in fact, that he found 'the colorless discs present in abundance'. The question seems to be one of exactness of method; for I have again repeated the experiment more than once, arriving at the same results as at first. Care must, however, be taken and time given to enable the osmic acid to thoroughly act on *all* the corpuscles; if the mixture of blood and osmic acid be diluted too soon with water, before the osmic acid has fixed the corpuscles, invisible discs are most certainly present in abundance, and the water has the characteristic clear tint significant of dissolved hæmoglobin. In a recent experiment I placed two large drops of the 2 per cent. solution of osmic acid in a watch glass, and into this squeezed a small drop of blood, and stirred rapidly with a glass rod; from this mixture were taken, at intervals of one, ten, and twenty minutes, small drops which were run under mica covers for microscopic examination. In all, except the first specimen, the liquor sanguinis remained perfectly clear and colorless, and the corpuscles packed beautifully. Not a trace, however, of the invisible corpuscles could be found, though I sought for them most diligently. At the end of twenty minutes the mixture was diluted with a fluid drachm of pure water, with the object of changing the refractive index of the serum, after the corpuscles had been fully fixed. Careful examination of this solution failed to discover a single invisible corpuscle, even though the staining re-agents, which bring into view the discs rendered quite invisible by the action of water, were added to the solution.

Thirdly, as to the salt solution; I have already stated that, for the saturated solution of common salt recommended in the first publication of Dr. Norris's paper as the basis of the staining fluids, he has now substituted a .75 per cent. solution, stating that a solution of common salt at this strength is said 'by others' to be preservative of the blood. This is certainly an error; and I do not know on what authority it is alleged. A .75 per cent. solution of common salt is far from being preservative of the blood-corpuscles. Its destructive power is not so potent, so rapid, nor so quickly or easily demonstrated, as that of a saturated solution; but it is none the less destructive in a proportionate degree. The effect of a .75 per cent. solution of sodium chloride on the blood is as follows. The great majority of the corpuscles flatten out, the central depression becomes much deeper, so that, when seen in profile, the corpuscles are of an hour-glass shape; presently short thick projections appear on the surface of the corpuscles, and after an interval of time these curl over, and the whole corpuscle becomes a crumpled shrunken body. The effect of the solution on a minority of corpuscles is, however, different. They are quickly converted into small round bodies, the discoid and biconcave form being entirely lost, as may be easily seen by watching them roll over and over in the cur-

rents. These corpuscles are at first of a darker hue; but, on watching them closely, many among them may be seen to pale and gradually fade into complete invisibility. The number that become invisible is very much less than in a saturated solution, and to this notable weakening of the strength of the salt solution which he employs may probably be due Dr. Norris's change of opinion as to the number of invisible corpuscles normally existing in the blood; for in the publication of his paper in 1878, when saturated salt solution was the basis of his staining fluids, he declares that the blood might be said to teem and swarm with these transparent bodies (p. 6); whilst in the present volume, when a .75 per cent. solution has been substituted, the proportion of invisible to visible corpuscles is alleged to be only 1 to 60. By a number of observations made with the corpuscle-counter, and comparing the results obtained by mixing the blood with a .75 per cent. solution of sodium chloride, and the preservative 5 per cent. solution of sodium sulphate, I have arrived at the conclusion that the loss of corpuscles by the use of the former fluid is about 3 per cent., though this figure would doubtless vary with the health and age of the subject of the experiment. The corpuscles which have been rendered invisible by the action of the salt, may be recovered again for inspection by Dr. Norris's method of staining with aniline blue.

The author's ingenuity in devising methods for procuring a view of invisible corpuscles is unflinching, and he further now directs that there should be used thin flexible mica covers, instead of glass. With these, the juxtaposition of the two surfaces is so perfect that the serum filters off, and the corpuscles pack as well as under the glasses prepared for the packing method; and by this simple method of treating the blood, the invisible corpuscle becomes visible, both by impact against the colored corpuscles in the capillary currents which are established, and when lying flat in single layer. The observation of the blood under thin mica covers is very instructive, and the following is what I have observed to take place. Let a small drop of blood be placed on the edge of a very thin mica or talc cover; the blood enters in minute capillary currents, so small, indeed, that only one or two corpuscles can pass along together; in fact, except for the hard inert surfaces and the lower temperature, the conditions somewhat resemble that of the circulation in the capillaries. Closely and carefully following these currents with a 1-8th objective as they penetrate between the mica cover and the glass slide, the corpuscles are seen to follow closely on each other, swimming in what seems to be a perfectly colorless fluid. Here and there may be observed a corpuscle slightly paler than the rest; but during the first few moments, and as long as the liquor sanguinis remains colorless, not a single transparent corpuscle can be found; though it is obvious that, in watching the corpuscles defile past in single or double file, the presence of colorless bodies could be easily detected. Presently, however, the currents, as they pass forwards, are observed to become tinted; and in parts where the contact of the two surfaces is too close to allow the corpuscles to pass, the liquor sanguinis, having by this time acquired a distinct yellow tint, passes on in currents free of corpuscles. On turning now to those parts of the preparation which are situated above these currents, the corpuscles will be found in places to have packed beautifully, and here and there currents may still be seen finding their way between masses of corpuscles;

and in both of these, in the currents, and in the packed masses, the invisible corpuscles can now be found—unstable corpuscles which have parted with their hæmoglobin to the tinted serum. After numerous observations of the interesting phenomena presented under the mica cover, I can state, as a fact, that the colorless corpuscle of Dr. Norris is only found when in the same preparation the liquor sanguinis is tinted. In the first few moments after the blood is shed, and whilst the liquor sanguinis is yet uncolored, the transparent corpuscle cannot be found, though diligently sought for, in the minute capillary currents, where, if present, it could be detected with the greatest ease.

Dr. Norris thinks that by mixing the blood with a soluble colloid, such as albumen or gum, the hæmoglobin is prevented from escaping from the corpuscles (p. 50), and says that, if this mixture be then run under thin mica covers, the invisible corpuscle will be found to be present. On repeating this experiment, I found that, though the slower movement of the capillary currents enabled the corpuscles to be observed with greater ease, I failed to find the invisible corpuscle as long as the liquor sanguinis remained untinted, but it appeared as usual when the hæmoglobin began to be effused from the corpuscles. That Dr. Norris is still able to assert that the normal existence of invisible corpuscles is satisfactorily demonstrated by this crucial experiment, as he calls it, is remarkable. He gives a photograph (photo. 52) of blood-corpuscles from which the escape of hæmoglobin has been prevented, and in which he states 'the invisible corpuscle is present as usual'. It would be difficult for an unbiassed person to detect in it the presence of a single colorless corpuscle. On comparing this photograph with No. 7 in the same volume, in which the invisible corpuscles have been in my view developed, but in Dr. Norris's preserved, by the prolonged action of common salt, it is exceedingly difficult to understand how he can consider they represent identical conditions; in one, exosmosis of hæmoglobin has been prevented, and the invisible corpuscle is absent; in the other, solution of the hæmoglobin has been induced by the agent employed, and the invisible corpuscle has been produced in abundance. Can any one continue to doubt to what the invisible corpuscle of Dr. Norris is due?

As Dr. Norris's theory rests entirely on the demonstration of the presence of the invisible corpuscle as a normal element of the blood, and as none of the processes hitherto invented to establish this fact are free from the objection of artificially giving rise to the very appearances which they are intended to demonstrate as normal, it is impossible, at present, to accept the theory as accurate, or based on scientific and acceptable data. When dealing with bodies so fragile and unstable as the red blood-corpuscles, bodies which by all the theories of blood-formation are presumed to be in the later stage of cell-life, it must be allowed that theories, deduced from appearances seen in these unstable bodies when they are placed under abnormal conditions, ought to be accepted with great reserve.

After devoting much time and care to the study of the subject, and repeating Dr. Norris's work, the conclusion seems to me to be inevitable, that his third colorless corpuscle is artificially produced; that the ingenious methods devised by him give rise artificially to the appearance which he seeks to demonstrate as normal; that he has not sufficiently taken into account the fallacies which vitiate these

methods of research; and that his theories of the physiology of the blood, based upon the presumed existence of an invisible corpuscle circulating in the blood, are still unproven. This is the more to be regretted, because this monograph testifies to prolonged skilful and patient labour, and the numerous photographs are taken with unusual skill. I could heartily have wished that it had been possible to confirm Dr. Norris's conclusions, and to accept his interpretations; but the facts seem to me to be at every point in opposition to his views.

ALICE M. HART.

LANNELONGUE AND COMBY ON PROLONGED OSTEOMYELITIS.

THE accumulated labours of thirty years on phlegmonous periostitis, M. Lannelongue's recent paper, and the important discussions initiated by him at the Academy of Medicine and the Surgical Society of Paris, have thrown much light on this serious disease. It is now known that the element of the first attack 'is the medullary cell, which, under the influence of irritation, regains the osteogenetic qualities possessed by it during embryonic life'. It proliferates abundantly, produces new bone and pus; and that series of disorders is seen to be developed, which, from the apparently very limited subperiosteal abscess, leads us gradually to the formidable symptoms of osteomyelitis with diffused phlegmon of the whole of a limb. The distant results of osteomyelitis, however, are not known, or imperfectly known. Death or recovery, it was said, occur after more or less prolonged suppuration and the expulsion of a sequestrum. That was all. No one had kept the patients in view, and no one had written the detailed history of the new affections which might attack a bone, predisposed by a first attack, and of which the form, the size, and the supply of blood have been profoundly modified by this serious inflammation. When, some months or some years after the cure of osteomyelitis, an affection of the bone supervened in the limb before attacked, it was called scrofulous or syphilitic necrosis or caries. It was a new and independent disease; and the close connection between the symptoms which had to be fought against, and the deeply seated disturbances and the old lesions, vestiges of the forgotten osteomyelitis, was not recognised. All, however, did not fall into this error. M. Verneuil pointed out the connection, and M. Gosselin, in the article on 'Osteitis', in Jaccoud's *Dictionary*, says that the epiphyseal osteitis of adolescence is the most frequent cause of necroses of spontaneous origin. In a recent discussion at the Société de Chirurgie, M. Trélat cited the case of a man whose thigh he had disarticulated for a chronic osseous affection, which had been in process of evolution for more than forty years, and of which the origin was suppurative osteomyelitis. Finally, here and there, cases are met with in which phlegmonous periostitis is pointed out, perhaps intentionally, in the antecedents of patients suffering from osseous necrosis. But, before the time of M. Lannelongue and his pupil, M. Comby, these ideas were by no means common. They were the first, in a remarkable paper on which this analysis is founded, to establish the relations of cause and effect, which frequently connect osteomyelitis with a series of affections of bone, which were supposed to be all but independent. They have shown that certain

chronic conditions, certain hyperostoses, contain deep bony abscesses, some inexhaustible fistulae. Some more or less extensive necroses were the legacy of an old acute osteoperiostitis, of which a rigorous investigation discovered the traces in the antecedents of the patient. Hence the name of chronic or prolonged osteomyelitis, given to these accidents by the authors.

Hyperostoses are the rule in osteomyelitis. On the boundaries of the suppurating foci, the irritation of the young cells of the periosteum, of the Haversian canals, and of the medullary canal, induce a more or less abundant proliferation. The elements are soon organised into bony tissue, and thus arise those new productions of variable form and size, tuberosities, spicula, stalactites, patches, grooves, true cylinders sheathing all or part of the old bone, which may become greatly enlarged. The Haversian canals, and the central medullary canal, are obliterated by the superadded layers of bony substance. When these hyperostoses are co-existent with acute phenomena, their origin, even when some time has elapsed, cannot be mistaken; but, if they only appear later on, it is no longer so. At certain points of the bone, there may remain some cause of irritation—a partially destroyed focus. New attacks may supervene, not sufficiently intense to produce a true inflammation, but sufficient to quicken cellular proliferation; and by degrees the bone becomes thicker. This has been attributed to syphilis, scrofula, and ordinary injuries; but attentive examination would reveal the true cause, former osteomyelitis.

MM. Lannelongue and Comby publish in their paper thirteen cases which have come under their observation, or which they have collected from other writers, and which show the presence of hyperostoses, as well in the flat and short bones as in the long bones. The primary disease was sometimes of from ten to twenty years' standing. In one case, acute osteomyelitis had made its appearance at the age of eight; extensive suppuration carried off the patient. Projections and protuberances were found on the bone; its circumference was 15 millimètres (nearly 6 inches), its curve was effaced, and its length exceeded that of the opposite femur by $4\frac{1}{2}$ centimètres (1.75 inches).

It is doubtful whether the preparations given to the Dupuytren Museum, by M. Lherminier, are connected with prolonged osteomyelitis. They represent hyperostosis of the tibia and fibula following ulcers of the leg, which rendered amputation necessary. In some of these bones, the hyperostoses are so slight, and the deformity so slightly marked, that the ulcer must clearly have been the lesion which necessitated removal of the limb. It has also been shown that ulcers may be the primary cause of a considerable thickening of certain bones. The tibia and the fibula increase threefold in size, the muscles become atrophied, the vessels and nerves are sheathed in bony grooves, and the aponeuroses of the limbs bristle withburned needles and stalactites.

Minute analysis of these cases proves that the loss of the substance of the integuments was primary; the peripheral irritation had propagated itself as far as the bones, and had induced hyperostosis. The same thing occurred in M. Lherminier's preparations; the most that could be said of them was that these exuberant osseous productions, once accumulated, had distended the skin and added a new cause to the former causes of ulceration. But it remains none the less established, in the opinion of some French authorities, that in these cases the ulcer was

the primary lesion. However that may be, M. Lannelongue's observations remain valid, and when, at any age much after adolescence, hyperostosis, accompanied sometimes by lengthening of the limb, by ankylosis, arthritis, chronic hyarthrosis, or some muscular atrophy, is found, inquiry must be made whether, in reality, it is not a case of prolonged osteomyelitis. It would not in this way be rare to find a thickening, a kind of swelling of the soft parts, hypertrophy of the hair, adhesions to the deep tissues; the integuments are of a higher temperature than those on the opposite side; the veins are dilated, and the pains are frequent. Acute attacks supervene, an abscess is formed, then a fistula leading to a denuded point of bone. These repeated attacks of osteitis were well known, but their origin has remained unknown for a long time.

Since Sir Benjamin Brodie's classic description has been popularised in France by Broca's labours, bone-abscess has been recognised. M. Cruveilhier has published an interesting thesis on this subject, which M. Golay has recently taken up and illustrated by fresh facts. It is known that these abscesses become developed not far from the articular cartilages, whether in the epiphysis or in the diaphysis, and that they are characterised by painful attacks, which break out with great violence, sometimes at long intervals. Sometimes there is present, at the level of the purulent collection, a thickening of the periosteum, or even a true hyperostosis. A permanently painful point, also, reveals the existence of a deep cavity. And it is there, sometimes, that a spontaneous opening takes place, by which the pus escapes. It is also known that the cavity does not always contain pus. M. Cruveilhier has seen, in one case, a yellowish liquid. The albuminous periostitis of Ollier and Antonin Poncet might only have been an abscess transformed by a sort of special absorption. Sometimes, even, there is no liquid at all, the pyogenic membrane and its granulations alone exist. M. Duplay, at the Saint-Louis Hospital, has been seen to open up, with the chisel and the gouge, two galleries hollowed in the diaphysis of a tibia, and lined with a granular tissue. There was not a drop of pus. Finally, since Gosselin's time, false abscess of neuralgic form—osteoneuralgia—has been described. Deceived by hyperostosis and attacks of pain, the surgeon believes in the presence of a purulent cavity, and the trephine only reaches a condensed mass of bony trabeculae.

The observations of MM. Lannelongue and Comby prove that all these varieties may only be forms of prolonged osteomyelitis. As a consequence of this disease, in fact, the bone is not normal; it is irregular, honeycombed into cavities, bristling with projections; its relations are changed; its form, consistence, and structure render it more or less unfit to fulfil the functions of leverage and support. Its circulation is badly carried on, ill-defined and the irregularity of the supply of blood accounts for the congestive outbreaks and the incessant inflammations which make the disease interminably long. Facts, also, leave no doubt of the osteomyelitic origin of some of these abscesses. M. Broca's case is as clear as possible. His patient had had, at eighteen years of age, at the lower end of the humerus, an osteomyelitis mistaken for typhoid fever. Sixteen years afterwards, he had paroxysmal pains, which gradually became intolerable. Trephining was done at the level of the most painful point; pus escaped; the focus was two centimètres long, half a centimètre wide, and lined with a very sensitive

membrane. M. Perdrigeon's case is equally definite. At twelve years of age, the patient had had osteomyelitis; at fifty-six years of age, after numerous outbreaks in the left femur, he died. In the bone previously attacked, a large anfractuous focus, ten centimètres long and three wide, and lined with a fungous membrane, was found. In M. Trélat's wards, at the Necker Hospital, there is, or was recently, a patient, aged forty-three, who suffered, in his childhood, from osteomyelitis of both legs. After many years, he came into hospital, for the first time, for violent pains of the lower end of the left tibia. The trephine was used, and the surgeon opened a large cavity filled with pus. This year there was a fresh outbreak, but at the lower extremity of the right femur. M. Trélat trephined again, and this time found a mass of granulations. This case is remarkable, for it shows, in the same individual, the two principal varieties of cavities which may be hollowed out in a bone by prolonged osteomyelitis.

Although more frequently recognised at the present day, these abscesses are of rare occurrence. It is not so with another change, namely necrosis, which attacks the long bones specially, but is also found in flat bones and short bones. Its history is always the same. The patient says that for a long time past he has suffered at intervals; there is pain in the bones; the adjacent tissues sometimes become inflamed, an abscess opens, a fistula is set up, and the probe, introduced into the opening, shows the existence of a denuded bone, which, in certain cases, is movable. But when it is desired to ascertain the origin of the necrosis, mistakes are constant. Should the patient be pale and emaciated, have some swollen gland, or have had some cutaneous eruption in his youth, scrofula is inferred. If this etiology cannot be accepted, syphilis or injury are pressed into the service, and no attempt is made to discover whether, ten to twenty years ago, there has not been some acute outbreak of osteomyelitis. It is only when the chronic form has followed immediately on the acute form, when there has been no apparent cure, that the etiological diagnosis is made. Very remarkable cases of necrosis, consecutive on prolonged osteomyelitis, have been noted. In Professor Verneuil's practice, at the Pitié Hospital, there was the case of a lad, who had a fistula about the two malleoli of the right leg. A probe came on denuded bony points; there was no movable sequestrum. It was ascertained that the patient had had osteomyelitis, the symptoms attending which were so serious that amputation had been proposed. However, the lesions appeared limited, and it was thought that a limited scooping-out would suffice. The patient was anaesthetised, and Esmarch's bandage applied. An incision of five centimètres (two inches) in length was made on the fibula. The external malleolus was emptied, and the joint kept intact; but in an upward direction the lesions were more serious than was suspected. The incision was enlarged to 10 centimètres, and yet the limits of the evil were not arrived at. The entire fibula was of necessity removed; there only remained the intact groove of the thickened periosteum. The tibia was then dealt with. The changes there, also, were very extensive. The malleolus and 15 centimètres of the bone were extirpated. The leg, thus deprived of all bony framework throughout more than its inferior third, was placed in a solid plaster splint. At the end of five months cure was obtained, with a shortening of the limb to the extent of 7 centimètres only.

M. Paul Réclus also gives, in the *Gaz. Hebdomadaire de Méd. et de Chir.* for Jan. 27, a case of a patient in the Hôtel-Dieu. There was long standing osteomyelitis, with two fistulae in the upper third of the right humerus. The bone was denuded. Esmarch's bandage was applied, and, by thermo-cautery, an incision was made from the acromion to the middle of the diaphysis. A thick lamina of fresh bone was found, and openings here and there through which the sequestrum was visible. With the chisel and hammer, the intermediate bridges of bone were removed. The new bone represented two-thirds of a cylinder lined with fleshy growths, on which rested the whole upper end of the eroded humerus. It was extracted and removed piecemeal; the bony groove was carefully scraped, the head of the humerus thoroughly emptied, and a dressing of iodoformised wadding was applied. The results were excellent. The enormous breach was filled up, and the new bone, which had been carefully preserved, formed a framework which appeared to be very solid. The shoulder-joint was healthy, and allowed extended movements.

These examples might be multiplied. M. Lannelongue's memoir, which is the basis of this article, contains some cases of a very remarkable character. M. Paul Réclus, however, from whose *résumé* this description is taken, has preferred quoting unpublished cases. MM. Lannelongue and Comby's facts prove that, in presence of a bony lesion, hyperostosis, central abscess, fistula, or necrosis, whatever may be its standing, or how spontaneous soever the lesion may appear to be, we should always endeavour to ascertain if there have not been previously an osteomyelitis—the real cause of the condition.

REPORT ON ANTISEPTIC SURGERY IN GERMANY.

FOREMOST in publishing results of new methods tried is the clinic of Professor Esmarch in Kiel, and we find a long article 'On the Use of Iodoform and Turf Dressings', by Dr. G. Neuber, in Langenbeck's *Archiv*, 1882, Band xxvii, the observations for which were made under Esmarch's own superintendence. The report says that, after the German Surgical Congress in 1881 was held, it was thought time to give iodoform dressing a trial; it was accordingly used for abscesses, whitlows, boils, suppurating glands, etc., the opened cavity being filled with iodoform, and covered with a pad of carbolised jute, which was sometimes left until the whole wound had healed, and was only exceptionally removed. The results of the use of iodoform in tubercular granulation processes were watched with great anxiety, inasmuch as very good results had been previously obtained by the use of Listerian permanent dressing. In fact, the list of resections reported on a former occasion by the same author in the *Archiv*, Band xxvi, Heft 1, p. 106, was one which, for brilliant results, has never been surpassed. Out of thirty-four resections of joints, thirty-one were cured, all of which had had a dressing, which was at the least sixteen days, at the most thirty-five days *in situ*, and was only once applied. In testing the efficacy of the iodoform dressing, all the most difficult cases to treat were reserved for it. The patients were all scrofulous, and had affections of the bones, joints, and soft parts. In each case, after incisions had been made, the granulations were well scraped out with the sharp spoon, and the cavity stuffed, rubbed, or powdered

with iodoform, and covered with a dressing of the same. The results were not at all brilliant. Of twenty-one cases, there were only thirteen cured, and these only after several months in hospital. Five had fistulæ, one had amputation done afterwards, one patient was still under treatment, and one died, after excision of the hip, of tubercular meningitis. This method is, therefore, neither quick nor radical, and does not protect the patient from relapse. The principal advantages it possesses over carbolic dressings are, that the iodoform is less irritating to the wound, is less volatile, and is absorbed less rapidly than carbolic acid.

Billroth's method of dressing with iodoform is as follows. The wound is powdered thinly with the drug, or filled with it, then a layer of cotton-wool with powdered iodoform on it follows, or a piece of iodoform gauze; then around this a sufficient quantity of wool, perfectly free from fat, a water-tight material; lastly, the bandages fixing and compressing the whole. These are changed from the second to the fourth day; later on, every five to eight days, though some dressing, according to Mikulicz, is left on longer.

The method adopted, according to Neuber, consists of sprinkling the wound with, at the most, 3 grammes (45 grains) of iodoform; puncture of the skin, or insertion of absorbable drainage-tubes; catgut sutures; placing in position of a small turf pad, with 2 per cent. iodoform on it, and of a larger one with nothing on it; fastening of the whole with a gauze or water-glass bandage; changing of the whole every twelve to forty days. The difference between the methods is merely the substitution of India-rubber drainage-tubes for the absorbable ones used at Kiel.

Gussenbauer gives an exact account of treatment with iodoform in tuberculosis of bone in the *Prager Med. Woch.*, 1881, No. 35. There were twenty-eight cases, of which fourteen were complete successes, whilst fourteen others were not completely cured, four cases altogether having had only one dressing, whilst others had one several times, even as many as nine.

Neuber says that, had the toxic characters of the drug been better known, and their development by contact with fresh wounds been understood before it was generally used, the sad accidents which have been recorded would have never been reported. In dressing mucous cavities, the best results have been obtained, the only drawback being the said poisonous effects, which were prone to develop rather quickly in these cases. Two deaths had to be reported in this division from iodoform poisoning alone. The symptoms of intoxication are much the same as those reported by Schede, Küster, etc., described in the LONDON MEDICAL RECORD for May 1882. The places in which most caution is necessary are the larynx, œsophagus, mouth, nose, and pharynx, as resorption from these localities is rapid, through contact with food, etc. An iodoform crystal was found in a branch of one of the bronchi in one case which collapsed.

In applying iodoform to the ordinary cases in which carbolic acid had hitherto been used, it was found that, under one dressing carried out with jute and gauze impregnated with iodoform dissolved in ether and alcohol in the strength of 10 per cent., and drawn through a wringing machine, twenty-four cases healed completely, twenty-two healed up to a few fistulæ and superficial granulations, which subsequently disappeared, whilst eight required several dressings, and two died. These results, however,

were not much better than previous ones; but iodoform has the advantage in being cheaper than the more elaborate carbolic dressing, the preparation of dressings is much simpler, and it has been already mentioned as being less volatile than carbolic acid. But iodoform should not be used in larger quantities than 4 grammes, and the 5 and 10 per cent. gauze jute and cotton-wool is much to be preferred to the carbolic acid preparations.

Now follows a most interesting report on a new dressing material, which was quite accidentally discovered by Neuber in the summer two years ago. A labourer one day appeared in the clinic, who had sustained a complicated fracture of both bones of the forearm eight or ten days previously, whilst working on a moor; the soft parts being extensively lacerated, and the wrist-joint opened. The man at once got a comrade to surround the fracture, as well as the whole forearm, with a thick paste of turf-mould, on which was then laid a sort of rough splint of wood. With this primitive dressing, he came to the clinic ten days afterwards, and, on being questioned, said he was very well otherwise. Numerous washings in a hand-bath at length freed the arm of all the turf, when it was found that the wound was healing beautifully, and had not a sign of suppuration, the surroundings being without any reaction. Some parts of the wound had united by first intention, others were granulating nicely. On the application of a Listerian dressing and fixation in a better position, the fracture and wound healed readily. The idea that in turf-mould another good antiseptic dressing might be found then struck Neuber, and he accordingly proceeded to have analyses and investigations made, the results of which showed that the dust resulting from the manufacture of sods of turf by the circular saw, as carried on in Schleswig-Holstein, and which is very light in weight, as well as in colour, possesses a powerful affinity for ammonia, carbonate of ammonia, and bad smelling materials generally, and takes up nine times its own weight of water. In the infantry barracks at Brunswick such turf-mould is used as a deodoriser in the privies, and renders faecal products absolutely innocuous. A series of experiments on its use in the dressing of wounds having been carefully carried out, the turf-mould is now used in the following manner, which has been very successful. Bags of gauze wrung out in 5 per cent. carbolic solution are prepared of two sizes, 12 and 24 square centimètres respectively. These are filled with turf-mould (or dust), the smaller bag with mould containing $2\frac{1}{2}$ per cent. of iodoform, which is laid on the wound directly it has been disinfected with either carbolic solution ($2\frac{1}{2}$ per cent.), zinc chloride (8 per cent.), or, at most, 3 grammes of iodoform. Over this is laid the larger bag, the mould in which is saturated with 5 per cent. carbolic solution. The whole is kept in place by a gauze bandage. As these exercise a very energetic pressure upon the wound and its surroundings, it has been found unnecessary to use the elastic compressive bandages hitherto in vogue, unless in the case of wounds near the openings of the body. In Esmarch's clinic, it has never been found necessary to remove this dressing for secondary hæmorrhage, even though the bloodless method is often adopted; and it is the rule to apply a permanent compressive dressing before undoing the tubing above the wound, the only other precautions necessary being that the limb should be elevated, and all ligatures applied before closing the opening. In all, there were treated in this manner,

from September to the end of November 1881, fifty-five wounds on fifty-three patients; the list comprising seven resections and osteotomies, seven scrapings out of carious bones and joints, five amputations, twelve extirpations of tumours, six removals of sequestra, five abscesses, thirteen various wounds, amongst which were seven nerve-stretchings and two herniotomies. There was no fatal case, except one after nerve-stretching for tabes dorsalis, said to be due to pyæmia after disease of the prostate and abscess of the bladder; but such a case should hardly have been operated upon. No diseases of wounds were observed. Thirty-one cases were without fever; aseptic fever occurred eleven times, slight inflammatory disturbance only six times, elevation of temperature four times. In fifty cases, the first dressing remained on until the end of the time intended, mostly a fortnight, or more; and in only five was it necessary to remove it before that time had elapsed. Turf prepared according to Neuber's directions may be obtained from the Torfbereitung's Fabrik in Ultersen, Schleswig-Holstein; and the cost of a turf dressing amounts to 1.80 marks, whereas a carbolic acid Listerian dressing costs upwards of 15.08 marks, if we take an amputation of the thigh as a standard, for which, at least, six complete dressings are required at 2.44 marks; hence turf dressings are eight and one-third times as cheap as these.

Summed up, the advantages of turf dressing are these. 1. A given quantity of the mould takes up more fluid than jute, gauze, or cotton-wool. If it be slightly moistened, its absorbent power is still further increased; wounds remain perfectly dry under it. 2. It possesses a great power of absorbing products of decomposition of organic substances, and hence prevents the same from occurring, and acts even in the unprepared form. Further experiments are being made in this direction. 3. The moistened mould is a very soft but still elastic substance, so that it is easily placed in the required position in the bags before applying them to the inequalities of the body. 4. It is the cheapest of known antiseptic dressings, one pennyworth sufficing for a dressing, and will be more so when it is found that the preparation with some antiseptic can be left out. 5. It makes a very suitable pad for all purposes when enclosed in gauze.

Neuber has further, since the date of his first essay, treated seventy-eight wounds with this dressing, that is, up to February 1882, and much the same class of cases, with the addition of ovariectomy, hysterotomy, and operation for floating kidney, one case of each. Of all these, only three died, namely, one from tetanus, one from delirium tremens and sepsis, one from gangrene of the leg and sepsis after resection of the knee on account of hæmophilic inflammation thereof. Altogether, therefore, 133 cases have been hitherto so dressed. The dressing remained from ten days to six weeks in 122 cases, and had to be changed only in eight. In 85 per cent. of the cases the wound was entirely healed on the removal of the dressing. The remaining 15 per cent. have since been healed or are under treatment. Glass splints are almost exclusively used in this clinic, and have been found to answer all requirements.

Schmid, in the *Centralbl. für Chir.*, Band ix, Heft 1, p. 3, 1882, reports on the use of salicylic acid in removal of sequestra, etc., at the Augusta Hospital in Berlin. He finds that there was no disturbance of the healing process in the wound; that no fever appeared; and that the secretions of the

wound never decomposed. In removals of sequestra, the cavity was packed full of powder (salicylic acid), and over it was placed salicylic wadding. The first dressing remained on an average eight to fourteen days in position, and the decomposition which might take place in the outer layers of the dressing had no influence on the wound itself. Compared with iodoform, this dressing seems to have similar advantages; but the author is strong in his belief in the specificity of iodoform against tubercular processes. Though 40 grammes were often put on wounds, no salicylic intoxication showed itself. The amount of secretion is greater than in iodoform dressing; but, altogether, nothing showed the latter to be superior to salicylic acid. With the exception, however, of Neuber's work just quoted, no result seems as yet to have been definitely arrived at by these different authors, whose evidence on all sides is very conflicting. It will be certainly safest to use not more than 4 grammes of iodoform for any purpose until we know more about it.

Hahn (*Berl. Klin. Woch.*, No. 24, 1882) reports seven cases of vaginal extirpation of the uterus, one of which ended fatally, and, as he believes, solely because he adopted drainage in it. His method sometimes consists in closing the peritoneal opening after removing the uterus, and then, without drainage of any kind, which is sure to promote peritonitis, filling the well-disinfected vagina with about four or five teaspoonfuls of iodoform, and packing it with gauze of the same nature. In other cases, Hahn leaves the opening patent, ligatures everything lateral *en masse*, and places, after due disinfection with 0.3 per cent. salicylic solution, a teaspoonful of iodoform at the very end of the cavity, so that the intestine is seen through the speculum to be lightly powdered with it, and then dusts four other spoonfuls along the vagina, closing it with a piece of iodoform gauze. This was done in carcinoma, and the dressing had to be changed after twenty-four hours, the vagina being irrigated with luke-warm salicylic solution, which usually brought out most of the iodoform.

In the German Surgical Congress, held at Berlin from 31st May to June 3rd, 1882, the subjects of antiseptics was introduced by Kümmell of Hamburg, who believes, that in using solution of corrosive sublimate, he has now achieved successes which will put iodoform in the background altogether. He uses a solution of 1 in 2,000, wadding saturated with 0.5 per cent. of sublimate, ligatures of silk boiled in 1 per cent. solution, catgut preserved in the same for twenty-four hours; and, as a powder dressing, he uses glass powder disinfected by the addition of solution of the sublimate. Cheaper than this, Kümmell says, is the use of quartz, screened through a fine sieve and burned. It is forced out of the wound by the granulations, and no grains of sand ever became incarcerated; but, to prevent this, he uses charpie made of glass-wool, which also makes the best material for drainage. At the same meeting, nearly every known substance was advanced, and held to be the correct one; for instance, acetate of alumina, sand, ashes of all kinds, saw-dust, charcoal, etc.; but the result is that any substance will act as an absorbent. It is only necessary to carry out the primary antiseptics correctly, to operate rapidly, and to leave the dressing undisturbed for as long a period as possible.

F. WILLIAM ELSNER.

VON NUSSBAUM ON THE VALUE AND DANGER OF ANTISEPTICS;

WITH REMARKS UPON THEIR USE IN MILITARY SURGERY.

IN an address delivered before the Medical Union in Munich, in April last, Professor von Nussbaum brought forward the question of the relative value, and at the same time the relative dangers, of the various antiseptic remedies that have hitherto been employed in surgery, and, passing each in review, placed before his audience a most valuable summary of their respective properties, gathered from his own experience and from that of contemporary authorities.

Commencing with a terrible reminiscence of the state of things prevailing in certain hospitals before the employment of antiseptic treatment, he showed, by reference to the figures of the Town Hospital in Munich, how the introduction of that system had at once reduced the mortality by one-half, and almost limited the death-lists to cases of old age, accident, or constitutional disease, such as tubercle or cancer, and how the period of convalescence after operation had been shortened to almost an equal extent.

'At first,' he said, 'I confined myself as strictly as possible to the use of Lister's carbolic dressing, and, even to the present time, have operated and applied dressings under the spray, notwithstanding the fact that many authorities regard it as superfluous. I have done this partly from a feeling of loyalty, since we owe the whole movement to Lister's dressing, and partly because all other modifications did not profess to do more, but, by their most ardent admirers, could only be said to be "very nearly as good as Lister's". Only after a considerable interval did I begin to make use of other antiseptic remedies, and then it was for the purpose of demonstrating to my pupils all the methods which had obtained repute; besides which, I considered that I ought to make myself familiar with all the antiseptic remedies in use, since one never can tell but that in time of war, or even of peace, one may find oneself in circumstances where the use of one or another antiseptic alone is available, and all the antiseptics in use can at least ward off the dreaded fatalities of former years, although the true Listerian method be superior to every one of them. Everything in the world, however, has two sides, and nothing is wholly free from fault, and hence even the Listerian dressing has its shady side.'

The necessity for extreme attention to all its details, without which its remarkable results cannot be attained; its cost, its inapplicability in wounds communicating with the natural apertures of the body; and, lastly, the susceptibility of certain skins to the irritative action of the gauze, were each in turn considered.

With regard to the latter, the name of carbolic eczema is wrongly applied to the affection produced, since the true irritant is the resin or paraffin with which the gauze is prepared, and no remedy for the evil can be of much service until the use of the gauze is omitted, and some other antiseptic substituted. The most serious drawback of all, the carbolic acid poisoning, was discussed at greater length.

'Carbolic acid is, indeed, a poison, and from my point of view every antiseptic, in certain doses, must be regarded as poisonous; for it is hardly conceivable that any drug can exist which, possessing the power of destroying or rendering functionless the

microscopic organisms which produce putrefaction, can at the same time be perfectly harmless towards the human organism. I do not number myself amongst those who believe in the existence of a special idiosyncrasy against carbolic acid.'

Various degrees of intensity of carbolic acid poisoning may be assumed; and these, being purely arbitrary, may vary in number according to individual experience. Three degrees, however, may easily be distinguished. 1. A very slight carbolism characterised by greenish urine, gastric symptoms, and weakening of the power of the heart and lung. This form, if no further carbolic acid be employed, tends rapidly to recovery. 2. Carbolism, usually after prolonged use of the acid, by which the circulatory and respiratory powers are depressed, anorexia, nausea, salivation, and ringing in the ears are produced, and an apathetic state is entered which threatens collapse. In all degrees of carbolism, a certain amount of renal irritation is manifest, but the occurrence of dark urine is more marked when absorption has taken place through the skin, than when the drug is administered internally. The worst form of carbolism is that which is characterised by the sudden onset of a cold, clammy sweat, followed by a thready and running pulse, and laboured shallow breathing; although consciousness remains, the end is always fatal. Injections of camphor, of atropia, or of sodic sulphate are useless; paralysis of the respiratory centres quickly follows, the heart usually continuing to beat for a short time after respiration has ceased. To these acute forms of carbolic acid poisoning must be added the chronic carbolism which occurs by its cumulative action, and is of great importance.

This liability to the toxic effects of the drug is probably the principal cause which has led to the search for substitutes for it. Of those which have been tried, some have met with very little support. Corrosive sublimate, for instance, has been but little used, and its tendency to produce hæmorrhage from the intestinal tract, even after external application, renders it too uncertain for use in large quantity. Benzoic acid, too, has made but little stir; acetate of alumina and thymol have found more supporters. The most important experiments, however, are those which have been made with chloride of zinc, and with boracic and salicylic acids. All three drugs have been employed, and their value demonstrated, by Lister himself, and the boracic acid has won from him especial praise for its power of checking pain, and of retaining its antiseptic action for a long time. It is especially useful in dressing wounds about the mouth, nose, and anus.

An especially prominent position must be reserved for the chloride of zinc, which possesses the most useful property of rendering antiseptic a wound which has already become septic. A solution of 8 per cent. strength often does most valuable service in this way, and cannot be too highly prized, its action being much more energetic than that of a 5 per cent. solution of carbolic acid. It is, however, more painful. In addition to these qualities, it has a useful effect in checking parenchymatous hæmorrhage after operations, without exerting any actual caustic powers, and has found great favour with Professor Bardeleben, as a dressing for recent operation wounds. The results obtained, taken together with the far greater simplicity and cheapness of its use, bring it into close competition with the genuine Listerian dressing.

Salicylic acid, again, deserves thorough recogni-

tion. It is especially valuable where dressings are required to last for a long time, its slow solubility and stability allowing it to remain antiseptic for a considerable period. The ultimate results of its use are very similar to those obtained by the Listerian method, but the length of time required to obtain these results is less satisfactory, the chief drawback being the feeble absorbent action of the salicylic lint. Rapid absorption of purulent secretions is an useful property in any form of dressing, and this property is possessed to a marked degree by Lister's gauze.

The practice of powdering open wounds or ulcers with salicylic acid, in a state of very fine division, has been lately introduced; and it is alleged that primary union is not thereby interfered with, the surface is not irritated, but is protected by an excellent and lasting antiseptic. 'By this method,' said Professor Nussbaum, 'I have obtained some surprisingly brilliant results. Severe compound fractures, in which I have had to lay bare the bones, I have then proceeded to fill up with salicylic acid powder, and they have again and again made a good and rapid recovery without a rise of temperature; one point, however, I certainly dare not assert, and that is, that primary union is never hindered by this treatment; for, in delicate tissues, as, for instance, the muscular tissues in children, I believe I have almost always produced formation of scabs, and often a very decided suppuration.'

'It has appeared to me also that, in cases where a large absorbing surface has been so treated, as, for instance, after removal of a cancerous breast, an unmistakably bad influence was exerted upon the constitutional state, so that I felt obliged to make an exception of the delicate tissues from those upon which I had had reason to praise its action so highly. Altogether there are, however, many valuable points in this method, and I shall take occasion further to point out the usefulness of its lasting antiseptic action when employed in military surgery.'

The most recent of antiseptic remedies of repute, viz., iodoform, deserves careful discussion, since results have been obtained by it which even the Listerian dressing cannot excel, and which have been obtained, further, in cases to which the latter is either inapplicable or unsatisfactory. In such cases, iodoform must be looked upon rather as auxiliary to, than rivalling the original method. One of its chief drawbacks is, however, its unpleasant odour; and to overcome this various deodorisers may be used, Tonquin bean, ethereal oils, etc. Being absorbed by skin, serous membranes, or subcutaneous tissues, it forms salts with the alkalies of the blood, which are, for the most part, quickly thrown off by the kidneys. It renders wounds painless and aseptic, its action in that respect being slow, but of long continuance. This slowness prevents its being of value in the rapid disinfection that is required for instruments, hands, etc. It is best used in the crystalline form as a coarse powder, being then less rapidly absorbed if used in large quantities for open wounds. Mosetig fixes the maximum dose at 60 grammes; but Professor Billroth and others who have used it freely have not scrupled to put 100 or even 200 grammes of iodoform powder into a fresh operation wound. Of late, however, much smaller quantities have proved equally effective.

Iodoform gauze, made by simply sprinkling iodoform on ordinary gauze, or the so-called Bruns' gauze (made with 4 parts of resin, 1 of glycerine, and

20 of rectified spirit), impregnated with 30 to 50 per cent. of iodoform, is now largely employed. Bougies of graduated strength, and solutions for injection, are prepared; but the use of the powder and of the gauze is the most universal. It is especially in cases of severe bruising or crushing of tissues, as in machinery accidents, that its value as a conservative power is seen, many amputations being saved by its prompt employment. The results that now follow operations upon the mouth, nose, vagina, rectum, etc., where iodoform is employed, contrast most favourably with those of former days, when continued suppuration and foul discharges led to numerous secondary affections, such as phlegmonous erysipelas, etc., not unfrequently with a fatal result. The operation of removal of the tongue for cancer was formerly attended by a mortality of from 40 to 50 per cent., which is now reduced to, at the utmost, 12 per cent.

Attempts have been made of late to prove that iodoform possesses a power of checking the progress of tubercular disease in general, and especially its local manifestations in the testis and the joints. This, however, requires further confirmation. Like the other antiseptic drugs, iodoform has its dangers. 'There is no powerfully acting remedy that may not, under certain conditions, be found to be possessed of unseen and dangerous properties; the lordly carbolic acid can destroy health and even life, because it may occasionally act rapidly; iodoform is an antiseptic acting much more slowly, but it is far more dangerous than carbolic acid. With a little practice and attention the use of the latter may be freed from danger, but it is far otherwise with iodoform. Hardly had its use become general in the clinical wards of the civilised world, when one heard on all sides of shocking accidents, and of genuine cases of poisoning.'

A series of such cases was collected and published by Professor Koenig, and immediately an anomaly presented itself, viz., that, whereas in many cases a few grammes of iodoform caused serious results, Professors Mosetig and Billroth were using as much as from 60 to 150 grammes with impunity. To explain this, the purity of the drug employed has been called in question, and the suggestion thrown out that the age of the patients affected might afford a clue. Neither of these explanations is satisfactory. More probable is the view that, in the presence of feeble heart-muscle or of kidney-disease, the separation of iodine by the kidneys is hampered, and its poisonous action exerted upon the blood. Mosetig, who first introduced the remedy, and who has used it in a very large number of cases without a single case of poisoning, believes that the key to the riddle may be found in the practice adopted by many surgeons of using carbolic acid, either as spray or lotion, at the same time as the iodoform dressing, the irritant effect of the acid upon the kidneys rendering them less able to carry on the due excretion of iodine. Cases have not unfrequently appeared, however, in which erysipelas has intervened in tissues dressed by iodoform alone; and therefore it would seem that the generally used combination of the two methods offers the best chances of success, due regard being always paid to the depressing effects of carbolic acid upon the heart and respiration.

It is probable, however, that we have not yet arrived at the true method of employing iodoform so as to obtain its best qualities, and to minimise its risks, and no pains or opportunities should be spared

by which to arrive at such conclusion. Of the dangers which beset its use the broad facts are now well known, and caution will always be observed in employing large doses, in using carbolic acid simultaneously, or in treating the subjects of fatty degeneration. Much more, however, remains yet to be learnt.

'Upon military surgery iodoform flashes like the first rays of the rising sun, and supplies exactly that want which has been long and earnestly felt. We know that our wounded soldiers, when once they have arrived at the field hospital or base hospital, will receive all that science, art, affection, or gratitude can suggest, but for them the worst and most dangerous stage is that which must elapse during their transit from the battle-field to the field hospital. Terrible, indeed, are these minutes, often extended to long weary hours, till help arrives to remove the helpless wounded from the spot where they have fallen. I am well assured that the most energetic efforts of the best sanitary officers must be incompetent to relieve all the terrors of this period; but, since the means of immediate treatment must be limited, especially where a large number of wounded have to be dealt with simultaneously, the immense value of a drug which can be immediately applied, and which will render wounds aseptic and cleanly until time has enabled the wounded to reach the hospital, cannot be overrated. During the Russian and Turkish war, von Reyman and Reyher showed most encouraging examples of the value of plugging wounds on the battle-field by antiseptic tampons. Five or six days of the roughest transport did not prevent the wounds so treated from appearing fresh and aseptic on arrival in hospital. Such results lend support to Esmarch's brilliant idea, to provide every soldier with the means of rendering his wounds antiseptic. With the great propelling powers of modern weapons, many gunshot wounds have all the characteristics of incised wounds, and of themselves become rapidly closed to the exclusion of septic matters. If, in our next war, we are provided on the battle-field with tampons of iodoform, or of iodoform with salicylic or boracic acids, I feel perfectly convinced that a large number of wounds will be found to be healed in the course of a few days; that all others will be placed in far more favourable conditions; and that, in many cases, it will be possible to send the wounded away at once to a distance, or even to their own homes, where they will no longer have to contend with the hardships and horrors of war, but will be nursed with the gratitude and affection that they so well deserve.'

E. CLIFFORD BEALE.

SHEARER AND OTHERS ON THE OPIUM QUESTION.

At the last quarterly general meeting of the British Medical Temperance Association, a paper was read by Dr. G. Shearer of Liverpool, on 'Recent Apologists for the Opium Trade'. In the course of this paper he refers to the opinion of Dr. Kane, and quotes him as follows:—'Viewed from any standpoint, the practice is filthy and disgusting; is a reef that is bound to sink morality; is a curse to the parent, the family, and the Government; is a fertile cause of crime, lying, insanity, debt, and suicide; is a poison to hope and ambition; a slanderer of family ties; a breeder of sensuality; a destroyer of bodily and mental function; and a thing to be viewed with

abhorrence by every honest man and virtuous woman.' This, we find, is taken from *Opium-Smoking in America and China*, by H. H. Kane, M.D., of the De Quincy Home, Fort Washington, New York City. As a short quotation sometimes fails to convey the true opinion of the author, we venture to supplement Dr. Shearer's extract by one or two others taken from the same work. On p. 75, Dr. Kane says: 'Many Chinamen smoke, and we should expect to find them incapacitated for work by it. But it is not so. From the overwhelming testimony given before the Congressional Committee to the effect that Chinamen, placed side by side with American, Irish, and British miners, do more than they, in a given time, on the hardest kind of work, we are fair to believe that the extreme physical deterioration, claimed to result from opium-smoking, must need some modification before being admitted to full belief.' He adds: 'I know men, Americans and Chinese, who are in this city to-day, and can be seen, who have been hard smokers for ten years, and who present none of the features usually ascribed to the smoker. Two, in particular, are of magnificent muscular development.' In his preface, p. vi, he says: 'Upon certain medical points, I believe the testimony of laymen, either English or Chinese, to be wholly worthless, and I hold that, with regard to certain questions; there has been too great readiness to accept all evils happening to the Chinese individual or nation as the certain result of indulgence in this vice. Statistics are too meagre, and too many factors enter into the problem to make it appear as simple as some would have us believe.' He warns us emphatically (p. 77) against those who, with the best intentions in the world, unconsciously resort to exaggeration and misrepresentation in support of their case. 'I firmly believe,' he says, 'that such a course does more harm than good in the majority of cases; the plain unvarnished truth, each statement of which is susceptible of actual proof, and based on facts, working the most good in the long run.'

The *Saturday Review*, in an able article on this subject (Sept. 9th, 1882), says, 'If a little philanthropic fad had not more lives than the proverbial cat, the agitation of the Society for the Suppression of the Opium Trade should by this time be dead and decently buried. The arguments brought against it would long ago have killed anything based on mere reason.' After discussing at some length the political aspect of the question, the reviewer deals with it from a medical point of view. 'Several travellers in China,' he says, 'who are not missionaries, and therefore do not start with a predisposition to find vices, and an overpowering sense of a vocation to cure them, declare that the stories about the ill-effects of opium-smoking are absurdly exaggerated.' In the province of Szechuan, where the habit is more prevalent than anywhere else in China, both Baron Richthofen and Mr. Colborne Baber found a healthy and industrious population. The latter gentleman declares that he never saw a single case of opium intoxication, although he had been for some months in the company of smokers in inns and on the road. Reference is made to the recent observations and publications of Sir George Birdwood and Mr. W. H. Brereton, their testimony being much to the same effect. The terrible stories told about the bad effects of the pipe have in all probability a very simple explanation. The missionaries come across men broken down by vices not peculiar to China, and, finding that they smoke, give the opium the credit of having brought them to that sad condition. Certainly,

the energy shown by the Chinese of late years does not harmonise well with pictures of national ruin, produced by this supposed vice. Opium-smoking is found to be compatible, both in Australia and in California, with a formidable degree of industry, intelligence, and sobriety. 'Probably, when the subject is talked about with a little more knowledge, it will be found that the bluster of Californian rowdies, and Australian larrikins, of which Mr. Goldwin Smith condescends to make himself the echo, and the gloomy rhetoric of missionaries, who do all things under a consciousness of Exeter Hall, are about on a par in point of accuracy.' WM. MURRELL, M.D.

SEGUIN ON LARGE DOSES.*

DR. SEGUIN considers that the dose of many remedies ordinarily prescribed in certain nervous diseases—such, for example, as chorea, cerebral and spinal syphilis, and neuralgia—is too small. In advocating large doses, he does so as the result of an extensive practical experience, and not on mere theoretical grounds. At the same time he takes all reasonable precautions, and says: 'I am carefully observant of all the circumstances which render patients susceptible, and always make an allowance for idiosyncrasy. Thus, in first prescribing a potent remedy, I take into consideration the age, sex, and size of the patient, and also make an estimate of his general condition, and note particularly the state of his circulatory organs. Then, for a patient whom I see for the first time, I order very small doses, doses such as the books justify, and, by steady increase, feel my way, fearlessly because watchfully, to the larger doses, often seemingly dangerous doses, which really affect the organism, and may cure the disease.'

Dr. Seguin gives Fowler's solution in doses of from three to thirty minims three times a day. In the case of children or sensitive adults, he may commence with a dose of only two drops, but usually begins with five, every day adding one drop to each dose. He does not attach any very great importance to giving it after meals, but is careful to give it largely diluted with water—half a tumblerful or more. Usually, when a dose of from ten to fourteen drops three times a day is reached, some arsenical symptoms appear, such as diarrhoea, nausea, vomiting, anorexia, or redness and puffiness about the eyes. When these symptoms are noticed, the administration of the arsenic should be suspended for forty-eight hours, and should then be resumed, the dose being still further increased. A remarkable tolerance is shown by most patients—even young children; and doses of twenty, twenty-five, and even thirty drops, three times a day, may be reached without a renewal of the symptoms. In one case, thirty-four drops of Fowler's solution were taken three times a day without the production of any unpleasant symptom. The author has been taught by experience not to expect amelioration of choreic movements until the toxic effects of arsenic are evident, and, in old or relapsing cases, not until the second period of toxicity. He finds it advisable to combine rest, even absolute rest in bed, with the arsenical treatment. If the patient be restless at night, an occasional dose of chloral will do good. Simple acute chorea may

be cured by this plan in a fortnight, and it is rare to meet with any case of chorea that resists this mode of treatment. There is no possibility of any permanent ill effect resulting. The urine of many patients has been carefully examined at the period of saturation with arsenic, but albumen has never been detected. Stomatitis was met with only once, and gastro-intestinal disturbance was never serious or permanent.

Of aconitia (Duquesnel's crystallised), Dr. Seguin also gives comparatively large doses. Some people are powerfully affected by small quantities, so that it is well, especially in the case of females, to begin with from 1-250th to 1-200th of a grain. In neuralgia, after a day's testing with minute doses, it may be given freely—1-100th of a grain every three or four hours, until distinct numbness and a feeling of coldness are experienced in the limbs and face. Then a longer interval should be allowed to elapse before giving another dose. Many people take daily three or four doses of 1-100th of a grain, and remain in a constant state of numbness, not only without inconvenience, but with much benefit. In some cases of chronic epileptiform neuralgia, the patients were kept under the influence of the drug for weeks at a time. In posterior spinal sclerosis, the dose of 1-100th of a grain has been repeated as many as eight times in the twenty-four hours. This form of nerve-pain is not relieved by aconitia, and, curiously enough, these patients rarely exhibit that numbness which is the sign of the action of aconitia in healthy persons. As a rule, the pain of trigeminal neuralgia ceases when the physiological effects of the drug are manifest. It is not alleged that it is a specific in this complaint, but it is certainly the best therapeutic resource at our disposal.

Dr. Seguin deals at length with the question of the maximum dose of conium. He employs the fluid extract of the U.S.P., and gives as much as 60, 80, or even 100 minims at a dose, repeating it, if necessary, as soon as the effect passes off. Of phosphorus he gives, in many nervous diseases, gr. 1-18 every three or four hours. [Some doubt is thrown on this statement by use of an unreliable solution. The author would have done better had he given his phosphorus in the solid form.—*Rep.*] Cases of obstinate facial neuralgia are cured by a few doses. Phosphide of zinc is given in doses of gr. $\frac{1}{6}$ to $\frac{1}{4}$, often in combination with nux vomica or belladonna. Nitrate of silver (crystallised) is administered with marked success in the treatment of locomotor ataxy and various forms of subacute and chronic myelitis, in doses of from a quarter to half a grain. It should be made into pills with some indifferent extract, such as taraxacum, or, perhaps, if there be any special indication for it, with nux vomica or belladonna. It should be given before meals, and even three or four doses may be safely administered in the twenty-four hours. A course of nitrate of silver should extend over two months, which, at the rate of 1½ gr. a day, would give 90 grains, a perfectly safe dose as regards freedom from discoloration of the skin. WM. MURRELL, M.D.

KING AND OTHERS ON GRINDELIA ROBUSTA.

THE following notices of the therapeutic action and uses of grindelia robusta are given in the *Therap. Gaz.* for July 1882. Dr. King says that grindeia robusta has been found especially efficacious in

* *The Efficient Dosage of Certain Remedies used in the Treatment of Nervous Diseases.* By E. C. Seguin, M.D., Clinical Professor of Diseases of the Mind and Nervous System in the College of Physicians and Surgeons, New York. Read before the Medical Society of New York, and reprinted from the *Transactions* of 1882.

asthma, giving prompt relief and effecting cures in cases previously rebellious to medication. Occasionally, however, as is, indeed, the case with all therapeutical agents, it has failed; but the circumstances attending these failures have not yet been determined. Further investigations regarding its action in this disease, and the cause of its occasional failures, are required. It has likewise been found efficient in bronchial affections, in pertussis, and in some renal maladies. The fluid extract is the preparation usually employed, the dose of which is from 10 to 15 minims, repeated three or four times a day, as may be required. Children require doses of from 5 to 15 or 20 minims.

According to the *United States Dispensatory*, the herb has a balsamic odour and taste, and a syrup made from the decoction is not unpalatable, and taken internally acts as an expectorant. But the chief value of the plant is as a remedy in asthma. A clergyman who had suffered extremely from that disease, and in whose case all the remedies usually given had been tried in vain, took, on going to bed, a wineglassful of syrup made from the herb, slept soundly through the night, and, under its continued use, had not been compelled for seven months to pass one night out of bed. It has also been very highly commended in iritis, used internally and externally, and as a local application in burns, vaginitis, and genito-urinary catarrh. It may be used as a poultice or injection (half an ounce to the pint).

Stillé and Maisch, in their *National Dispensatory*, describe grindelia as having a persistent acrid and bitter taste, and exciting the secretion of saliva. It is said to reduce the respiration rate, to stimulate the brain and spinal cord, and subsequently to produce a tendency to repose or sleep, with impaired power of the legs. In experiments on frogs, it appeared to arrest breathing, and to cause engorgement of the heart. It increases the secretion of urine, and irritates the kidneys. The herb of this plant is reputed to be useful in whooping-cough and bronchitis, and of singular efficacy in asthma. We have been informed of several cases occurring in aged persons, in which half a teaspoonful of the fluid extract afforded almost instantaneous relief. It has been used with alleged advantage in catarrh of the bladder and of the uterus, and as a dressing for burns and blisters. The dose for a child two years old is stated to be ten drops of the fluid extract every two hours. It is added that no unpleasant symptoms have been observed after large doses.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. FOX, G. H.—An Improved Plan of Using Chrysophanic Acid Externally. (*Med. News*.)
2. JARDINE.—Koroniko, a Remedy for Chronic Dysentery (*Chinese Customs Rep.*)
3. WORMLEY.—Gelsemic Acid. (*Amer. Jour. of Pharm.*, July 1882.)
4. Suppositories for Hemorrhoids. (*Louv. Med. News*.)
5. Styptic and Antiseptic Cotton. (*New Remedies*.)
6. HENRY.—Iodoform in Enlarged and Ulcerated Tonsils. (*New England Med. Monthly*, June)
7. Formule. (*New Remedies*, Aug.)
8. HARNACK.—Carlsbad Salt. (*New Remedies*, Aug.)

9. LIMOUSIN.—New Method of Preparing Blisters. (*Rép. de Pharm.*, June 1882.)
10. SCHIFFER.—Extract of Guachamacá. (*Pharm. Zeit.*, June; and *New Remedies*.)
11. PAVESI.—Saccharate of Coffee. (*Annali di Chim.*, 1882.)
12. CULLIMORE.—Aconite for Hydrophobia. (*Lancet*, Aug. 1882, p. 215.)
13. HUTCHINSON.—Iodine in Erysipelas. (*Brit. Med. Jour.*, Aug. 1882, p. 209.)
14. EDGE.—Herpes Zoster during Arsenical Treatment. (*Brit. Med. Jour.*, Aug. 1882, p. 308.)
15. BARTON.—Sulphide of Calcium in Cancer. (*Lancet*, Aug. 1882, p. 332.)
16. LITTLE.—Medical Rubbing. (*Brit. Med. Jour.*, Aug. 1882, p. 351.)
17. THOMPSON.—Lycoperdon Giganteum as a Hæmorrhagic. (*Brit. Med. Jour.*, July 2, 1882, p. 136.)
18. STARTIN.—Chaulmoogra Oil in Leprosy. (*Brit. Med. Jour.*, July 1882, p. 159.)
19. DICK.—On Tapeworm. (*Brit. Med. Jour.*, July 1882, p. 202.)
20. SCRIVEN.—The Treatment of Dysentery. (*Lancet*, Aug. 1882, p. 259.)
21. SENATOR.—The Therapeutic Use of Soft Soap. (*Berl. Klin. Woch.*, No. 38, 1882.)
22. ALBERTONI.—The Influence of Certain Drugs on the Irritability of the Cerebrum, with Remarks on the Treatment of Epilepsy (*Archiv. für Experim. Pathol. und Therap.*, Band xv, Heft 3 and 4.)
23. FRÄNKEL.—The Treatment of Catarrhal Angina (Tonsillitis). (*Verhandl. der Berl. Gesellsch.*, Band xii.)

1. Fox on an Improved Plan of using Chrysophanic Acid externally.—Dr. George H. Fox (*Med. News*), says that, while chrysophanic acid is of the highest value as an external remedy in cutaneous affections, its action is difficult to control. As all know who have had experience in its use, it is very liable to produce a severe and unexpected dermatitis, and almost certain to ruin the underclothing and bed-linen of the patient. These objectionable features he has endeavoured to obviate by adopting the following method of applying the remedy. A soft paste is made by rubbing the chrysophanic acid with a sufficient quantity of water and smeared upon the psoriatic patches, the scales of which have been previously removed, by one or more hot baths, with soap friction. As soon as the paste has dried, which it does in one or two minutes, a layer of collodion should be allowed to flow over each patch and to harden into a protective coating. This will remain in place for several days or longer, according to the situation of the patches, and when it falls or is washed off, the application of the powder and the collodion should be repeated. By this procedure the chrysophanic acid in full strength is kept in contact with the affected skin, and prevented from exciting undue inflammation of surrounding parts or staining the clothes. A mixture of the powder and the collodion may be used, but it is less efficacious. A film of the collodion doubtless interferes with the action of the acid upon the skin. A somewhat similar plan which Dr. Fox has tried consists in the use of gutta-percha tissue to retain a strong chrysophanic ointment in contact with psoriatic patches. The edges of this tissue will adhere tightly to the skin if a small camel's-hair brush, dipped in chloroform, be passed rapidly beneath them.

2. Jardine on Koroniko, a New Remedy for Chronic Dysentery.—Koroniko, from *Veronica parviflora*, is reported by Dr. J. Jardine (*Chinese Customs Rep.*) as a potent remedy in cases of chronic dysentery, varying in duration from six weeks to four years, and in which from twenty to thirty mo-

tions containing blood and mucus were voided daily. Fifteen doses of tincture of koroniko reduced them to one-half, another fifteen doses reduced them to three or four daily, and a third like quantity effected a complete cure. Koroniko seems to be the vulgar name adopted in New Zealand for the plant.

3. *Wormley on Gelsemic Acid*.—Professor Theodore G. Wormley, in the *Amer. Jour. of Pharm.*, July, 1882, has contributed a valuable chemical examination of the root of *Gelsemium Sempervirens*. His principal aim is to show that gelsemic acid and esculine (found in the bark of the horse-chestnut) are not the same chemically, as alleged by M. Sonnenschein and Mr. Charles Robbins. Prof. Wormley announced, in the *Journal of Pharmacy* for June 1870, that *Gelsemium Sempervirens* contained a non-nitrogenised principle of an acid reaction which was named gelseminic or gelsemic acid, and also a strongly basic principle, which was named gelsemia or gelsemine. Professor Wm. Procter, jun., made a similar analysis about 1859-60 in the *American Journal of Pharmacy*. Of twenty-five cases of gelsemium-poisoning collected, thirteen proved fatal. Mr. Wormley admits that there is no known chemical antidote. *Post mortem* detection of the presence of gelsemium can be more readily and fully obtained than in the case of any other vegetable poisons. Both the acid and the alkaloid are recognised by their fluorescent properties. As esculine has the same fluorescent properties, it will be necessary to extract the gelsemium with ether, as ether does not extract esculin.

4. *Suppositories for Hemorrhoids*.—The following formula is given in the *Louv. Med. News*. R. Iodoform, 5j; balsam of Peru, 5ij; cacao butter, white wax, aa, 5jss; calcined magnesia, 5j. Incorporate the mass thoroughly and divide into twelve suppositories. Insert one after each evacuation of the bowels, and oftener if needed.

5. *Styptic and Antiseptic Cotton*.—The following formulæ are given in *New Remedies*. Styptic Cotton: Solution of chloride of iron (sp. gr. 1.480), 2 parts; distilled water, 12 parts; potash alum, 1 part; purified cotton, q. s. Dissolve the alum in the water, add the solution of chloride of iron, and soak a sufficient amount of purified cotton in the mixture. Dry it at a temperature below 140 deg. F. Pick it up and preserve it in a stoppered bottle. Styptic and Antiseptic Cotton: Tannic acid, 5 parts; carbolic acid, 4 parts; alcohol, 50 parts; purified cotton, q. s. Dissolve the acids in the alcohol, and soak a sufficient amount of purified cotton in the solution. Dry it at a temperature below 140 deg. F. Pick it and preserve it in a stoppered bottle.

6. *Henry on the Use of Iodoform in Enlarged and Ulcerated Tonsils*.—Dr. Henry describes (*New England Med. Monthly*, June 15) a number of cases of hypertrophy and ulceration of the tonsils, which he says he has cured by the use of iodoform in the form of spray. He was thus able to get the local effects of a strong solution, made by dissolving the powder in ten parts of strong sulphuric ether. He says that the value of iodoform is now conceded by all those who have had any experience in its use in this class of affections. The difficulties in depositing it on the surface of the glands have deterred many from adopting it in every-day practice. In powder it is easily deposited over the surface of a wound, or an ethereal solution can be passed over a surface that is exposed to the air; but this is difficult in the case of the tonsils and pharynx, and especially the posterior portion of the tonsils. The use of very strong specially constructed spray-tubes, and

the use of compressed air, with a very heavy pressure, appear to be necessary. Three such tubes are essential—one turned downward, one straight, and the third turned upward. With the first, the larynx and surrounding lower parts can be treated; with the straight tube the middle part of the throat, pharynx, fauces, palate, and anterior portion of the tonsils can be sprayed. The posterior portion of the tonsils can only be sprayed with the tube with the downward curve. To do this well, the patient must be artificially excited to the effort at retching. By so doing the tonsils are turned forward and sideways, thus enabling the operator to pass the curved tube behind the posterior portion of the glands. In some, this effort at retching is involuntary, on the slightest provocation. It can be easily induced by tickling the palate with the end of the tube. The deposit of the iodoform with the apparatus described is almost instantaneous, and is easily controlled, and can be directed to any spot. With the first expiration of air following the withdrawal of the tube, the ether is evaporated and expelled, leaving the iodoform well impressed on the glands and surrounding mucous surfaces. The coating is of a pale yellow colour, and with the evaporation of the ether all unpleasant sensation is removed. The slight pungent taste and odour of the ether pass off entirely with a few fresh inspirations and expirations. Care must be taken with the tubes, for they are easily filled up with crystals that are difficult of removal. When the iodoform is first exposed to the action of the ether in the proportion mentioned, it is perfectly soluble. When the ether has been evaporated, the remaining iodoform in the tubes crystallises, and is not again soluble to the same extent.

7. *Formulæ*.—The following formulæ are selected from the non-official formulary of the Dutch Society for the Advancement of Pharmacy (*New Remedies*, August 1882).

Ferri Tannas: Tannate of Iron.—Solution of chloride of iron (ferric; spec. grav., 1.480-1.484), 35 parts; tannic acid, 30 parts; alcohol (stronger), 12 parts; water of ammonia, q. s.; distilled water, q. s. Dilute the solution of chloride of iron with 200 parts of distilled water; precipitate completely with water of ammonia, collect the precipitate, wash it well, and mix it with a solution of the tannic acid in 40 parts of distilled water. Macerate for a few hours, and then add the alcohol. Collect the precipitate upon a strainer, wash it, and dry it. It should be a coal-black powder.

Plumbi Tannas: Tannate of Lead.—Solution of subacetate of lead, 100 parts; tannic acid, 38 parts; distilled water, q. s. Dilute the solution of subacetate of lead with 500 parts of distilled water, and add to it the tannic acid, previously dissolved in 500 parts of distilled water. Let the mixture stand a few hours, collect the precipitate upon a filter, wash it with about 500 parts of cold distilled water, and dry it at 25°-30° C. (77°-86° F.)

Tincture Alexipharmaca Huxhami: Huxham's Compound Tincture; Huxham's Tincture (of Bark).—Red cinchona (Javanese or East Indian), in coarse powder, 48 parts; orange peel, deprived of the inner white layer, 36 parts; serpentaria, bruised, 9 parts; saffron, finely cut, 4 parts; stronger alcohol, 240 parts; water, 240 parts. Macerate for seven days, express, and filter.

Tinctura Antasthmatica: Anti-asthmatic Tincture.—Liquorice root, cut and bruised, 12 parts; iris (blue flag) root, 6 parts; squill, dried and bruised, 3

WRIGHT'S

typical example is that seen in

From **THE LANCET**, Dec. 22nd, 1866:—'In our hands it has been a most effective agent in skin diseases, especially of the chronic eczematous class; and one case of psoriasis, which had resisted all other kinds of treatment, speedily got well under the application of the

From the **MEDICAL TIMES & GAZETTE**, January 19th, 1867:—'We have more than once called attention to the value of this remedy in chronic eczema.'

From the **BRITISH MEDICAL JOURNAL**, April 1st, 1882:—'This is by no means a new preparation, for it has been in extensive use for many years. It is an alcoholic solution of coal-tar, and is a disinfectant of considerable value. Medicinally, it is often used for the destruction of pediculi, and as an external application in eczema, psoriasis, and other skin diseases.'

Kept in stock and sold by all Druggists (Wholesale and Retail) throughout the United Kingdom and Colonies.

Proprietors: **W. V. WRIGHT & CO.**, Southwark Street, London.

See Testimonials of entire Medical Press and from leading Dermatologists.

THE PRACTITIONER of September 1881, reports a lecture entitled 'Recent Advances in the Therapeutics of Diseases of the Skin', by Professor W. A. JAMIESON, M.D., F.R.C.P.E.D. The following is an abstract therefrom:—'Itching, which owes its origin to too slow a current of blood, of which the most Eczema connected with varicose veins of the leg—but to the same category also many examples of Pruritus Scroti, Labiorum and Ani may be referred—is best relieved by careful flannel bandaging, well applied suspensory bandages, and laxative salts or mineral waters, which unload the rectal veins by freeing the portal circulation, combined locally with **weak tarry lotions**, one of the best of which is **Wright's Liqueur Carbonis Detergens**, a well-made alcoholic solution of **Coal Tar**, suitably diluted.'

LIQUOR

CARBONIS

We esteem it a very From the **BRIT. MED. JOUR.**, Sept. 22, 1871:—'We have tested it, and can affirm its value as a detergent agent. We consider the Liqueur is an article of great utility.'

DETERGENS.

THE

HUNGARIAN WINES

Of his Imperial and Royal Highness the Most Serene ARCHDUKE ALBRECHT are for the first time introduced into this country. The **RED**

KADARKA

AND

WHITE RIESLING,

at 24s. per dozen, are highly recommended. Sample Dozen Cases, at 30s., 37s., and 55s. delivered free in every part of the kingdom.

CAUTION.—The Bottles are protected by the seal of the Archducal Estate, without which none are genuine. Pamphlets free on application.

MAX GREGER & CO., Limited,

Wine Merchants to Her Majesty the Queen; Sole Consignees for the above-named Wines for Great Britain, Ireland, and the English Colonies,

7, MINCING LANE, E.C., and 2, OLD BOND STREET, LONDON, W.

When purchasing **MAX GREGER'S CARLOWITZ (HUNGARIAN CLARET)**, examine the Corks whether they are branded with our name in full, and with the **HUNGARIAN CROWN**, without which none are genuine.—**MAX GREGER & Co., Limited**, Wine Merchants to Her Majesty the Queen, 7, Mincing Lane, and 2, Old Bond Street, London.

UMNEY'S

At Medical International Congress, London, the Indian Bark was declared to be the Bark of the future.

Extensively used in private and Hospital practice, on account of its **ELEGANCE, MEDICINAL VALUE, and MODERATE COST.**

FLUID EXTRACT

OF

CINCHONA.

Lancet.—'An excellent preparation; contains all the alkaloids of the Bark.'
Med. Times & Gaz.—'An excellent, elegant, reliable and very convenient preparation.'
Pharmaceutical Journal.—'Excellent preparation, furnishing the constituents of the Bark in a concentrated form.'
Chemist and Druggist.—'Pharmaceutically worthy of the valuable medicine which it represents.'
Medical Press and Circular.—'Used in hospital and private practice with the most satisfactory results.'

Made from Bark of Cinchona Succirubra, as grown in Government Plantations of British India.

See opinions of Medical and Pharmaceutical Press, and testimony as to its superiority over all other Fluid Preparations of Cinchona.

Price 10s. 6d. per lb.

To be obtained of all Druggists (Wholesale and Retail) in the United Kingdom. In ordering, specify 'UMNEY'S'.

WRIGHT, LAYMAN, AND UMNEY,
SOUTHWARK, LONDON, S.E.

SCHERING'S
PURE CHEMICALS FOR MEDICINE.

DR. JACOBSEN'S
CINNAMIC ACID. New Antiseptic.

LIEBREICH'S
PUREST CHLORAL HYDRATE CRYSTALS.
Warranted never to change by age.

SCHERING'S
Pure CHINOLINE Salts
Or Artificial QUININE Substitute.

Applications for Samples and Prices through the Wholesale Drug and Chemical Houses will find prompt attention by

A. & M. ZIMMERMANN, 21, Mincing Lane, LONDON, E.C.
Sole Agents of the 'Chemische Fabrik auf Aktien', vormals E. SCHERING.

FINZELBERG'S PEPSINE PORCI.
Will never change by Age or Exposure.

Ph. Germ. to dissolve within 6 hours 100 parts White of Egg and 250 parts Fibrine.
Apply Dr. WITTSTEIN'S Pepsine Test.

IMPORTANT.—Most Pepsine, although prepared according to the P. B., is useless, as it dissolves nothing, there being no available Pepsine present.

FINZELBERG'S Pepsine being sold by warranted definite solving capacity is the only practical and reliable Pepsine known for therapeutical purposes.

See 'British Medical Journal', 30th July 1881.

Samples sent gratuitously.

Sole Wholesale Agents—A. & M. ZIMMERMANN, LONDON.

KUNHEIM'S
PURE NAPHTOL IN STICKS.
For Medicinal Purposes.

See LONDON MEDICAL RECORD, and other Organs of the Faculty.

SOLE WHOLESALE AGENTS:—

A. & M. ZIMMERMANN, LONDON.

parts; saffron, finely cut, 2 parts; alcohol, 214 parts; benzoic acid, 1 part; sugar, 18 parts. Macerate the first four ingredients with the alcohol during fourteen days; then express and dissolve in the strained liquid the acid and sugar. Finally filter.

Tinctura Antifebrilis Warburgi: Warburg's Fever Tincture (Abbreviated Formula).—Tincture of orange-peel, 5 parts; compound tincture of aloes, 20 parts; stronger alcohol, 15 parts; spirit of camphor, 2 parts; sulphate of quinine, 1 part. Dissolve the sulphate of quinine in the alcohol, and add the other liquids. N.B.—Tincture of orange-peel (*Dutch Pharm.*) is prepared by macerating one part of sweet orange-peel (only the outer yellow portion) with 6 parts of alcohol for 14 days. Compound tincture of aloes (*Dutch Pharm.*) is prepared by mixing equal parts of tincture of aloes (aloes 1, alcohol 8), tincture of myrrh (myrrh 1, stronger alcohol 8), and tincture of saffron (saffron 1, alcohol 8). Spirit of camphor is composed of camphor 1, stronger alcohol 12 parts.

Tinctura Chinoidini: Tincture of Chinoidine.—Purified chinoidine, in fine powder, 2 parts; hydrochloric acid, 1 part; alcohol, 17 parts. Dissolve the chinoidine in the alcohol and acid, and filter.

Tincture Digitalis Ætherea: Ethereal Tincture of Digitalis.—Digitalis, dried and in coarse powder, 2 parts; ether, 5 parts; stronger alcohol, 15 parts. Macerate during seven days, express, filter (avoiding loss by evaporation), and preserve the filtrate in a dark place.

Tinctura Gelsemii: Tincture of Gelsemium.—Gelsemium, in powder, 1 part; alcohol, 10 parts. Macerate during three days, express, and filter.

Tincture Kamala: Tincture of Kamala.—Kamala, 3 parts; stronger alcohol, 8 parts. Macerate during three days, and filter.

Tinctura Guarana: Tincture of Guarana.—Extract of guarana, 1 part; alcohol, 16 parts. Dissolve the extract in the alcohol, and, if necessary, filter.

Extractum Guarana: Extract of Guarana.—Guarana, 1 part; stronger alcohol, 3 parts; water, q. s. Mix the guarana with 2 parts of the alcohol and 3 parts of water, and let it stand three days, occasionally shaking. Then express and treat the residue with a mixture of 1 part of the alcohol and 2 parts of water. Let it stand during one day, express, unite, and filter the strained liquids, and evaporate them, on a water-bath, to a thick extract.

Tinctura Puchury: Tincture of Puchury.—Puchury beans (from *Nectandra Puchury* Nees), in coarse powder, 1 part; stronger alcohol, 8 parts. Macerate during seven days, express and filter.

8. *Harnack on Carlsbad Salt.*—Dr. Harnack of Strasburg, who assigns no therapeutic value to any constituent except the chloride, sulphate, and bicarbonate, has found the salt to have the following composition: Sodium bicarbonate, 36.19 parts; sodium chloride, 17.28 parts; sodium sulphate, 46.09 parts. He, therefore, recommends (*New Remedies*, Aug. 1882) to prepare the artificial salt as follows: Sodium sulphate, 100 parts; sodium bicarbonate, 80 parts; sodium chloride, 40 parts.

9. *Limousin on a New Method of Preparing Blisters.*—M. Limousin (*Rép. de Pharm.*, June 1882) has devised a new form of blister, with a view to afford a greater variety of choice in degree and kind of vesication, and also with a view to preserve the ready-made blister. He spreads a thin layer of ordinary blistering cerate upon strong thin unsized paper, and covers it with the same. The vesicating layer is about one and a half millimètres in thick-

ness, and one of its surfaces is camphorated. When using the blister, its outline is marked upon the paper covering it; it is then cut off and applied to the part by means of a piece of adhesive plaster. The covering paper may be readily removed, both from the plain and from the camphorated side, by means of a wet sponge. If the physician order a blister covered with oiled paper, it is only necessary to saturate the covering paper with oil. The same process may be also used for the preparation of other plasters.

10. *Schiffer on Extract of Guachamacá.*—Dr. Schiffer, in a paper lately read before the Medical Society of Berlin (*Pharm. Zeit.*, June 7th), states that he had obtained some of the extract of guachamacá from Dr. Karl Sachs, who had come into possession, while returning from Venezuela, of two trees, to which the most remarkable effects are ascribed by the natives. The plant appears to have become only recently known; only a few scattered botanical notices by some South American physicians exist, according to whom it belongs to the natural order Apocynaceæ. The best and most simple preparation is an aqueous extract, prepared on the water-bath. It contains an alkaloid, soluble in water, but little soluble in absolute alcohol, and insoluble in ether or chloroform. In these respects it resembles curare; also by the fact that the active principle is almost completely precipitated by tannin. Most of the alkaloid exists in the bark and contiguous layers; some, however, also in the wood. The therapeutic effect differs much according to the season. During the rainy season, a copious supply of milky juice exudes from incisions made in the bark. This juice is the most active form. To produce the specific effects of the drug, one-sixth of a grain of the extract is required for a frog. The symptoms, varied in intensity by the dose, begin to show themselves after fifteen to eighteen minutes, and then follow each other rapidly. At first the animal becomes tired, hangs down its head, permits itself to be laid on the back, does not draw up the leg when touched, etc. In a few minutes it appears paralyzed, as if by curare, with this difference however, that respiration continues. The circulation and action of the heart are, of course, unchanged. If the dose be large, death ensues; if moderate, recovery takes place after one or two days. Dr. Schiffer had, so far, made a few experiments of the remedy upon man. A small dose injected in himself produced no abnormal effects. A hypodermic injection of one sixth of a grain, administered to a young man suffering from spasms (in Dr. Frerichs's clinic at Berlin), remained without effect for three-quarters of an hour, but afterwards the patient fell into a deep sleep, lasting three hours (in day-time), and then awoke without feeling the slightest untoward effects. Dr. Schiffer, therefore, believes that the remedy may be found valuable in diseases involving an exaggerated action of the motor apparatus, and possibly also as a general hypnotic.

11. *Pavesion-Saccharate of Coffee.*—Dr. Carlo Pavesi (*Annali di Chim.*, 1882) describes a new method of concentrating and administering the valuable and useful constituents of coffee as follows:—Roasted coffee (best), 1 part; refined sugar, 2 parts; warm water, q. s. The coffee is exhausted, in a convenient displacement apparatus, of all its soluble constituents, by means of the warm water; the clear brown percolate is mixed with the sugar, and evaporated, at a temperature not exceeding 122° F. in a suitable apparatus, to dryness. Finally, it is reduced to powder, and kept in well-closed vessels. The

evaporating vessel should be shallow, so as to present a large surface of liquid to the air; or, better still, a vacuum-apparatus may be used. The product is a brownish powder, of a coffee odour, of a sweet and slightly bitter, very agreeable taste, and very soluble in cold water. Dissolved in boiling water, it yields a very fine cup of coffee. If made into a paste with tragacanth, it may be formed into tablets or troches.

12. *Cullimore on Aconite for Hydrophobia.*—In the *Lancet*, August 1882, p. 215, Mr. Cullimore records a case of hydrophobia successfully treated by the administration of aconite. The patient, a boy, aged ten, came under treatment three weeks after being bitten by a supposed rabid dog, with a painful and angry looking wound, high temperature, and the usual symptoms of hydrophobia. The patient was placed in a quiet corner, fed on milk thickened with arrowroot, and a mixture of one minim of the tincture of aconite, six grains of bromide of potassium, six minims of tincture of cinchona, and water to half an ounce, to be taken every half hour for twelve doses, and then three times a day. On the fourth day the patient had made some improvement, which continued steadily till the twelfth, when he was well enough to be discharged. Aconite in hydrophobia has a double object. It eliminates the poison from the blood, and it relieves the accompanying congestion of the nerve centres. Mr. Cullimore recommends minim doses of the tincture as a prophylactic to all who may be bitten by animals about whose condition there is the slightest suspicion, as it acts like a sedative, quieting fidgets, one of the earliest and commonest symptoms of rabies.

13. *Hutchinson on Iodine in Erysipelas.*—In the *Brit. Med. Jour.*, August 1882, p. 209, Dr. C. S. Hutchinson records a case of a large, robust man, who was thought to be *in extremis* from a violent attack of idiopathic erysipelas of the head and face. Iron and the usual internal remedies had been tried: but no external application had been used. Iodine was now painted on the scalp. This had a magical effect, the patient being out of danger two days afterwards, the amendment beginning with the first application of the iodine. Dr. Hutchinson has never before seen so desperate a case recover so quickly. [A reference to the *Medical Digest* shows that the value of iodine has been known for thirty years.—*Rep.*]

14. *Edge on Herpes Zoster occurring during Arsenical Treatment.*—In the *Brit. Med. Jour.*, August 1882, p. 308, Dr. Edge records the case of a girl ten years of age, who after taking three-minim doses of the solution three times a day for chorea, had a well marked attack of herpes zoster on the right side. There were none of the usual constitutional symptoms which often supervene after taking a prolonged course of arsenic. The treatment was suspended on the appearance of the rash; but, in similar cases reported by Mr. Hutchinson and others, although the arsenic was continued, the herpes ran its course and disappeared in the ordinary time.

15. *Barton on Sulphide of Calcium in Cancer.*—Dr. Barton (in the *Lancet* for Aug. 1882, page 332) records three cases of scirrhus of the breast, in each of which, both before and after removal of that gland, he administered sulphide of calcium for a considerable time, with apparently great benefit; in none of the cases was there any sign of a return of the disease, after some months. Unfortunately, he has omitted to state how long this improvement

actually remained; and, as it is not an uncommon thing for a cancer patient, after operation, to go on well for some time without any treatment at all, Mr. Gaylor has taken the opportunity, on page 377, to call the efficacy of the sulphide of calcium into question.

16. *Little on Medical Rubbing.*—In the *Brit. Med. Jour.*, August 1882, p. 351, is a report of a paper, read at the Annual Meeting of the British Medical Association in Worcester, on medical rubbing, by Mr. Fletcher Little, in whose opinion it is one of the most effective and powerful remedies we possess, as it can restore a wasted muscle, unloose a stiffened joint, restore the enfeebled circulation, bring back sensation to a benumbed limb, soothe irritated nerves, promote digestion and assimilation, causing healthy waste and excretion. The directions given for the rubbing are very simple; no muscle should be rubbed except it be soft, and no joint except the skin over it be relaxed; the limbs must always be rubbed from the extremities upwards, and the trunk from above downwards. Bearing these in mind, Mr. Little states he can do, with an intelligent rubber, all that the Zander establishment performs with its costly and ingenious machines.

17. *Thompson on a New Hæmostatic.*—In the *Brit. Med. Jour.*, July 2nd, 1882, p. 136, Mr. Ed. Thompson draws attention to the ordinary puff-ball or lycoperdon giganteum, which grows close to the roots of trees in some of our woods, as a hæmostatic, and cites a case of an old woman, who, having previously been weakened by frequent hæmorrhage from a cancer of the breast, constantly applied the puff-ball for seventeen years, and during that period had little or no hæmorrhage and much less suffering. Mr. Thompson has used this remedy, and found it stop hæmorrhages in which iron and matico had failed. Mr. Fagan, of Belfast, also has found it most efficient as a hæmostatic. In one case, it controlled arterial hæmorrhage from the bone in the neighbourhood of the eyeball. It seems that its properties are well known to the Irish surgeons.

18. *Startin on Chaulmoogra Oil in Leprosy.*—Mr. Startin reports a case of true eastern leprosy in the *Brit. Med. Jour.*, July 1882, p. 159. The patient, after many years' residence abroad, chiefly in the tropics, with little or very bad food, and having had ague very severely, became covered with tubercles, which suppurated, forming ulcers with clean-cut edges; he suffered from loss of muscular power, numbness, loss of sight, and other nervous phenomena, pointing to the diagnosis of leprosy. All treatment had been unavailing, till Mr. Startin ordered him chaulmoogra oil internally, and to be rubbed on the affected parts twice daily; within a few weeks reparative action was set up in the ulcers and only a few fresh tubercles appeared, and these, instead of suppurating, became abortive and died away. Mr. Startin concludes that leprosy can be relieved if not cured by this remedy.

19. *Dick on Tape-worm.*—Dr. Forbes Dick, in the *Brit. Med. Jour.*, July 1882, p. 202, states his belief that the liquid extract of male fern will expel not only the segments but also the head of the tape-worm if given in sufficient doses. His mode of administration is as follows. The patient may be allowed a full mid-day meal, and a little bread and tea at 5 p.m. At 10 p.m., a binder is to be applied to steady the stomach; and, on lying down, two drachms of liquid extract of male fern, in mucilage, with a little spirits of chloroform, are to be taken, to

be followed early the next morning by half an ounce of turpentine beaten up with the yolk of an egg. After this, the patient is to be kept quiet to prevent strangury. Dr. Forbes Dick has found this much more certain than taking several small doses.

20. *Scriven on the Treatment of Dysentery.*—Mr. Scriven in the *Lancet*, Aug. 1882, p. 259, recommends the use of large enemata, either of plain warm water or with the addition of alum, in the ulcerative stage of dysentery. The patient should be laid on his right side, the pelvis raised slightly and the legs flexed during the injection. The fluid must be injected slowly, and suspended for a few minutes if it causes griping. The quantity used must be about four pints. As an adjuvant to this, a small enema of forty minims of tincture of opium, in four drachms of mucilage, may be used to produce quietude of the bowels and sleep. In acute dysentery, Mr. Scriven has had most satisfactory results from a dose of five grains of calomel, followed in three hours by four drachms of castor-oil. If the symptoms continue, eight leeches are applied to the anus, ipecacuanha and opium being administered at intervals of twelve hours, and, at a later period, bael fruit to check diarrhoea. For children of thirteen months, three or four grains of ipecacuanha powder, with half a grain of compound kino powder, act as efficiently as a larger dose in the adult. In children still younger, calomel twice a day acts better than ipecacuanha. Mr. Scriven makes these observations from a long Indian experience.

RICHARD NEALE, M.D.

21. *Senator on the Therapeutic Use of Soft Soap.*—Professor Senator considers that amid the many new remedies introduced, some of the old have fallen undeservedly into disuse, among these especially soft soap (*Berl. Klin. Woch.*, No. 38, 1882). He has used inunctions of soft soap in numerous cases with most distinct benefit, viz., in chronic non-scrofulous glandular swelling, in indolent syphilitic glandular swelling, and in serous exudations, including the exudations in synovial cavities. He cannot come to a definite conclusion as to the rationale of the action, whether it is the massage employed, or the irritation produced, or the alkali absorbed; but the fact of the increased absorption under this treatment he considers undoubted.

22. *Albertoni on the Influence of Certain Drugs on the Irritability of the Cerebrum, with Remarks on the Treatment of Epilepsy.*—Professor Albertoni's experiments were performed on dogs and apes, the drugs used being bromide of potassium, atropine, and cinchonidine. For full details we must refer to the original (*Archiv für Experim. Path. und Therap.*, Band xv, Heft 3 and 4, 1882). The author sums up his results as follows. 1. The continued use of bromide of potassium very markedly reduces the irritability of the cerebrum in dogs. Electric stimulations, which in the normal condition are effective, produce, after the use of bromide of potassium, either no result or a very slight one. Even a single large dose considerably dulls the cerebral irritability. After continued use of bromide of potassium, it is no longer possible by electric irritation of the cortex cerebri in dogs (the area, namely, for the facial nerve and the extremities) to cause epileptic attacks, not even when much stronger currents are used than those sufficient to produce them in the normal condition. From this it may be concluded that the bromide of potassium presents a strong resistance to the extension of the discharge from the irritated point to the rest of the cerebrum. 2. Atropine increases the irritability of the cerebrum, the surface

of which, during its use, shows a greater sensitiveness to electric stimuli. This action is especially marked with not very high but still poisonous doses of the drug. Differences of irritability and development of the cerebrum explain the following interesting facts: a. The slight action of atropine on children and young dogs; b. The much stronger cerebral action of atropine on the dog than on the sheep, the brain of the latter, although more developed, being much less irritable; c. The absolute inertness of this material in the case of pigeons, whose cerebrum is unirritable. The possibility of causing epileptic attacks in the higher mammalia by electric stimulation of the cortex cerebri is neither removed nor weakened by continued use of atropine. 3. Cinchonidine in therapeutic doses increases in epileptics the frequency of the attacks, and, along with all other active principles of cinchona bark, is contraindicated in epilepsy. After removal of the cerebrum or psychomotor centres, cinchonidine still causes epileptic attacks. Its action is on the central motor ganglia. The continued use of bromide of potassium prevents the production of epileptic attacks in dogs by large doses of cinchonidine. It also prevents the fatal action of cinchonidine. The continued use of atropine in no way affects the epilepsy-producing, nor the fatal action of cinchonidine. It will, therefore, be seen that bromide of potassium would be of use in cases of epilepsy arising from tension of the nerve-centres, while atropine would be absolutely injurious. In cases of epilepsy from fright, or from congestion of cerebral vessels, or in cases of peripheral origin, atropine may possibly be useful.

23. *Fraenkel on the Treatment of Catarrhal Angina (Tonsillitis).*—Under this term, Dr. Fraenkel (*Verhandl. der Berl. Med. Gesellschaft*, Band xii, p. 239) understands mainly that form called tonsillitis lacunaris, a disease which, he says, in the great majority of cases, subsides without treatment, so that our object can only be to shorten or render it less severe. The use of astringents, such as nitrate of silver, he considers useless, as the disease lies mainly in the crypts of the tonsils, which the astringent does not reach. The same is true of gargles and of inhalations, while the former, in addition, frequently of themselves cause unpleasant sensations in the throat. At the same time, it must not be understood from this that the throat is to be left dry in this affection. The use of emollients gives frequently much relief. Dr. Fraenkel has tried submucous injections of a carbolic acid solution, so as to be sure of reaching the crypts, but has seen no benefit from them. Among internal remedies for the disease, Dr. Fraenkel has seen no good result from chlorate of potash, which he has found most useful in certain forms of stomatitis. Of guaiacum, recommended strongly by Dr. Morell Mackenzie, he has had no experience, nor has he had any experience of tincture of aconite, which last remedy, he appears to think, has been borrowed from homœopathic sources by English physicians. Ice and cold applications are to many most grateful, while to others they are absolutely intolerable. For some time, Dr. Fraenkel has treated all his cases either with quinine or with salicylate of soda. Of fifteen cases treated with large doses of quinine, not one has lasted longer than forty-eight hours, the usual average being from two to five days, he believes. Dr. Fraenkel himself has suffered frequently from this disease, and has never so quickly recovered from any treatment as from this. He takes three doses of about 4 grains of quinine within an hour at night. Notwithstanding, however, that

quinine so shortens the disease, it does not in certain cases prevent the formation of peritonsillar abscess. The *rationale* of the action of quinine Dr. Fraenkel does not pretend fully to understand. Its antiphlogistic and antifermentative actions seem scarcely enough to explain it, for salicylic acid seems to have no such favourable action, and while tonsillitis is well known to be infectious, it can scarcely be called one of the infective diseases proper, for one attack rather predisposes to others. He recommends the treatment to the attention of physicians, as each can have only a limited number of such cases under his care.

JAMES ANDERSON, M.D.

MEDICINE.

RECENT PAPERS.

1. NEALE.—On Scurvy. (*Lancet*, Aug. 1882, p. 321.)
2. HENDERSON.—Perforating Ulcer of the Duodenum. (*Brit. Med. Jour.*, July 1882, p. 160.)
3. MILLICAN.—Causes of Acute Tonsillitis. (*Lancet*, July 1882, p. 169.)
4. BULL.—Abscess of the Spleen Perforating the Stomach. (*Lancet*, Aug. 1882, p. 260.)
5. OTT.—On a Sign of Tubercular Meningitis. (*Philad. Med. Times*.)
6. REMAK.—Pathology and Treatment of Localised Muscular Spasm. (*Verhandl. der Berl. Med. Gesellsch.*, Band xii.)
7. FRÄNKEL.—The Connection between Nervous Asthma and Diseases of the Nose. (*Ibid.*)

1. *Neale on Scurvy*.—In the *Lancet*, Aug. 1882, p. 321, Mr. W. H. Neale, late Medical Officer of the *Eira*, gives an account of his fifteen months' experience in the arctic regions, during which there was scarcely any illness in a crew of twenty-five men. He expresses the opinion that if men were to live on the flesh of animals indigenous to the country, even without vegetables, they will run very little risk of scurvy; he also suggests that blood should be used as an antiscorbutic; should this prove to be a prophylactic, it will greatly enhance its value as a portable, nutritious, and wholesome food for travellers. These conclusions are supported by the experience of Dr. Lucas, which occurred, curiously enough, near the tropics. He states on p. 331 that, in the case of the semi-savage hill tribes of Afghanistan and Beluchistan, the food consists mainly of meat, and is altogether devoid of vegetables; yet these people are quite free from scurvy. This is explained by the fact that fresh meat is alkaline, and continues so till *rigor mortis* passes off, when it becomes acid. In the arctic regions, *rigor mortis* does not occur; in hot countries, the meat must be eaten before it can occur. Mr. Neale gives, on p. 370, a list of the vegetables saved from the *Eira*, and the manner in which they were preserved and cooked. Of these, the Dutch vegetables, which are mixed with a good quantity of fat, are spoken of most highly.

2. *Henderson on Perforating Duodenal Ulcer*.—Mr. W. Henderson reports a case of perforating duodenal ulcer in the *Brit. Med. Jour.*, 1882, p. 160. The patient, a groom, aged 34, came under treatment for an agonising pain in the right hypochondriac region, which was relieved by morphia; this pain returned occasionally during six months, after which period, the patient, after tea, in stretching himself while hanging up a picture felt the pain most severely, and died within twenty-four hours in a state

of collapse. At the *post mortem* examination, on opening the abdomen, two quarts of extravasated matter were found in the abdominal cavity; and a round ulcer, half an inch in diameter, with thick rounded margins, and without any adhesions, was discovered in the duodenum. A second case is cited with similar symptoms, but fortunately followed by recovery, so that the diagnosis could not be confirmed.

3. *Millican and others on the Causes of Acute Tonsillitis*.—Mr. Kenneth Millican, in the *Lancet* for July 1882, p. 169, cites the case of a Cambridge student who suffered from acute tonsillitis while undergoing great mental anxiety, the result of an examination, and having his meals irregularly, thus confirming Dr. Atkinson's statement that it generally depends on these two causes. Mr. Bays, in the *Lancet* of Aug. 26, p. 336, records a case of a man, aged 57, who was subject to tonsillitis since he was twenty, but had been free for ten years, having an acute attack, the cause of which was obscure. His meals were quite regular, and the only mental anxiety he had was the dread of apoplexy, for the premonitory symptoms of which he was on his club. Although salicylate of soda was given from the commencement, the disease ran through its course to suppuration. On the same page, Dr. Atkinson mentions that he has seen it in connection with masturbation, and that in his opinion it is never caused by cold alone. A curious addition to the treatment of this disease is made on p. 377 by Mr. Grewcock, who confidently recommends when the patient cannot swallow to stand opposite him and pull downward the lobes of his ears. While doing this he can perform the act of deglutition without pain. Mr. Grewcock leaves the theory of this extraordinary fact to be found out by others. [Having tried this plan personally, the reporter has found it to be a failure.—*Rep.*]

4. *Bull on Abscess of the Spleen Perforating the Stomach*.—Mr. Bull reports, in the *Lancet* of Aug. 1882, p. 260, the case of a man, aged 42, who had served in the army in India for nine years, during which period he was very temperate in his habits, but suffered occasionally from ague. He had worked as a groom, and indulged freely in drinking for the last nine years. His last illness began with nausea and vomiting of blood, and was characterised by frequent hæmatemesis, malaria, and rigors, each rigor leaving him extremely exhausted; the only abnormal physical sign being tenderness on great pressure, over a surface not larger than a sixpence, in the epigastric region immediately below, and slightly to the left of, the ensiform appendix. He became weaker after each rigor, and died in an exhausted state after one on the eleventh day. At the necropsy, four perforating ulcers were found at the splenic end of the stomach; behind these was an abscess in the spleen; the substance of this organ was soft and friable. The ulceration had opened up a medium-sized splenic artery. All the other organs were healthy. Mr. Bull is of opinion that hæmorrhagic infarction occurred during one of the patient's attacks in India, which remained latent, and that consecutive inflammation and suppuration were accelerated by intemperate habits, and failing health.

RICHARD NEALE, M.D.

5. *Ott on a Sign of Tubercular Meningitis*.—Dr. Lambert Ott, in the *Philadelphia Med. Times*, describes, as a sign of tubercular meningitis, extreme tenderness elicited on pressing the femur. He observed this incidentally in one case and confirmed

it in a second case, pressure upon other portions of the extremities causing no distress whatever.

6. *Remak on the Pathology and Treatment of Localised Muscular Spasm.*—Dr. Remak demonstrated three cases of this nature in the Berlin Medical Society (*Verhandl. der Berl. Med. Gesellsch.*, Band xii, p. 127). The first consisted in clonic spasm of the muscles of the right face, more especially the zygomatics—the remnants of a complete facial paralysis on that side, following an injury to the facial nerve in the lower part of the aqueduct of Fallopius. He found the electrical irritability of the zygomatics much lower than that of the other nerves of the face. The second case was a recurrence of severe spasm in the muscles supplied by the right spinal accessory, treated and apparently cured by his father eighteen years before, and recorded by him as a case of torticollis. His treatment had consisted in the use of a constant galvanic current, with the positive pole placed over the right cervical transverse processes, and more especially over the fourth and fifth. By a repetition of the same treatment, Dr. Remak achieved very great relief of the symptoms. The third case was that of a child with clonic spasms of the platysma myoides, and also of the deeper muscles at the back of the neck, the result of a fall. Treatment with a constant galvanic current, the positive pole over the muscles affected, diminished but did not cure the spasms.

7. *Fränkel on the Connection between Nervous Asthma and Diseases of the Nose.*—Voltolini records two cases of well-marked asthma cured by the removal of numerous polypi from the nose. Hänisch also records two cases of the same nature, in both of which the asthma was cured by operation, and recurred on the recurrence of the polypi, to be again cured by operation. Hartmann and Schäffer have each recorded one case, and Dr. Fränkel has already recorded two others, and now gives the details of three other cases observed by him (*Verhandl. der Berl. Med. Gesellsch.*, Band xii, p. 99). In all of these (one being a recurrence in a previous case), Dr. Fränkel himself observed the asthma, and has ascertained that the cure has been a lasting one, not a single attack of asthma having occurred after complete removal of the polypi and cauterisation of the points of attachment. The causal connection between the two affections is, Dr. Fränkel considers, fully established. The stenosis of the nasal passage by the polypi does not account for the dyspnoea, for, in certain of Dr. Fränkel's cases, there was no stenosis whatever, nor was there any inflammation or congestion to explain it. Considering that bronchial spasm most fully explains the symptoms shown by asthma, Dr. Fränkel believes that the asthma is here caused by a reflex influence arising from the irritated mucous membrane with which the polypi are in contact. This explanation, he considers, fits in with the other known forms of asthma, cardiac, dyspeptic, uterine, etc. Asthma from nasal polypi is, he says, comparatively rare, and there is no difference in situation or structure in those polypi that cause asthma. As to a certain extent supporting his theory, Dr. Fränkel points out that most asthmatic patients have their attacks at night followed in the morning by a clear watery discharge from the nose. He notes, also, the occurrence of hay asthma, asthma from inhalation of ippeacuan powder, and the fact that the smoking of various remedies frequently greatly benefits asthma. Dr. Fränkel records a carefully observed case, where severe and long existing asthma appeared to be cured by the cure of a chronic nasal

catarrh. The mucous membrane was much swollen and congested. This condition was cured by local application of a solution of nitrate of silver, and the asthma disappeared—not the dyspnoea merely, but also the physical signs which had previously been present in the lungs. JAMES ANDERSON, M.D.

SURGERY.

RECENT PAPERS.

1. LESSER.—The Operative Treatment of Caseating Glandular Swellings. (*Centralbl. für Chir.*, No. 22, 1882.)
2. PILCHER.—The Ligature of Large Venous Trunks. (*Philad. Med. Times*, July 1, 1882.)
3. KINLOCH.—Aneurism of the Anterior Tibial Artery. (*Amer. Jour. of Med. Sciences*, July 1882.)
4. BECKEL.—The Operative Treatment of Genu Valgum. (*Revue de Chir.*, No. 6, 1882.)
5. GRÜNBERG.—A Case of Obturator Hernia. (*Deuts. Zeitschrift für Chirurgie*, Band xvii, Heft 1 and 2.)
6. MURDOCK.—Removal of Plaster-of-Paris Bandages. (*Nashville Jour. of Med. and Surg.*)
7. LEVY and MOORE.—The Treatment of Transverse Fracture of the Patella. (*Med. Bulletin*.)
8. WEIST.—Foreign Bodies in the Air-Passages. (*Boston Med. and Surg. Jour.*, No. 24, 1882.)
9. LIDELL.—Fractures of the Skull Restricted to the Inner Table. (*Amer. Jour. of Med. Sciences*, April.)
10. JOHNSON, C.—Skin-Grafting. (*International Surg.*, vol. i.)
11. BRICHETTI.—On the Indications for Nephrectomy. (*Gazz. degli Ospitali*, Aug. 9.)
12. VIZIOLI and BUTERA.—On the Value of Cold in Aneurism. (*Gazz. degli Ospitali*, June 1882; and *Gazz. Medica Ital. Prov. Venete*, July 29, 1882.)
13. NICOLAYSEN.—Resection of the Pylorus for Cancer. (*Nord. Med. Arkiv*, vol. xiii; and *Med.-Chir. Rundt.*)

1. *Lesser on the Operative Treatment of Caseating Glandular Swellings.*—Dr. L. von Lesser of Leipzig, in an original contribution to the *Centralbl. für Chir.*, No. 22, 1882, on the treatment of enlarged and caseating lymph-glands, states that, in consequence of the unsatisfactory results in such cases of external applications, and, also, of parenchymatous injections of Fowler's solution, and of solutions of carbolic acid, he was led to remove such swellings with the knife. In a large series of cases, and in many regions of the body, but particularly in the neck and about the lower jaw, masses of swollen lymph-glands were so completely removed, that no remaining diseased glands could be seen in the wound, and the sheath of the large vessels at the seat of operation was often freely exposed. Notwithstanding the extent of the wound in many of the cases that were thus treated, the healing generally took an aseptic course, and there was not any necessity in most instances for the patient to keep to his bed. In the majority of these cases a permanent cure was attained; that is to say, the cicatrix of the wound remained sound, and no fresh glandular swellings formed around the seat of operation. The general condition of the patient, in each of these favourable cases, improved in a remarkable manner. In other cases, on the other hand, the cicatrix lasted but for a short time. It remained red and swollen, and, after a short interval from the date of operation, usually about three weeks, it broke open, and gave exit to a discharge from the wound of caseous material. Such a result was observed even in those

cases in which, during the extirpation of the diseased glands, no portion of the caseous material itself was allowed to come into contact with the surface of the wound, the diseased glands having been removed *in toto* without any preliminary disturbance of the cheesy deposit. In these cases of fistulous condition of the wound, a decided cure was not effected until after repeated removal, by scraping, of the renewed cheesy deposit. In a third set of these cases of extirpation, the wound healed, and its cicatrix afterwards remained sound, but about the wound a fresh mass of swollen and diseased glands was speedily formed. Dr. Lesser had recently an opportunity of observing a case in which, after an injection of a 5 per cent. solution of carbolic acid into an enlarged and degenerated suboccipital gland, the skin over the gland became perforated, and the caseous deposit was discharged through this orifice, as in a case of spontaneous elimination. In this instance, there was speedy healing, with the formation of a small round and smooth scar. This result led Dr. Lesser to try subcutaneous 'scooping out' of the caseating glandular swelling, instead of resorting to extirpation. In this plan of treatment, the superficial caseating gland is fixed between two fingers of the operator's left hand, and a sharp and narrow knife is then thrust through the skin into the diseased glandular structure. Through the small wound thus formed, a small sharp spoon is introduced into the gland, and the caseating mass is broken down, and afterwards removed, partly by the use of the spoon, partly by being pressed out through the small wound in the skin. The broken-down substance of several glands may thus be removed through one opening. But very little bleeding, it is asserted, occurs during this operation, and Dr. Lesser has never observed any resultant effusion of blood beneath the skin. It was at first feared that in this plan of treatment further infection might be set up through the presence of remaining portions of caseous material in the subcutaneous and circumglandular connective tissue. It is stated, however, that no indications of either general or local infection were observed in any of the cases in which Dr. Lesser applied this treatment. Unless the operation be carried out with attention to the details of the antiseptic method, with disinfected hands and instruments, the use of the spray, and the subsequent application of antiseptic dressings, it is liable to be followed by circumglandular phlegmon. It is not considered necessary to administer an anæsthetic during the operation, except to children and feeble subjects, and when several punctures have to be made at the same sitting. In dealing thus with glands that are quite superficial, a light antiseptic dressing is all that is needed during the after-treatment; but, when the sharp spoon has been passed deeply into the tissues, a small drainage-tube, it is recommended, should be passed through the opening in the skin, and be retained during the first three or four days. Dr. Lesser holds that this method of scooping away caseous lymph-glands is preferable to extirpation. It is a much less severe treatment, and need not prevent the patient from continuing his occupation. The disfigurement is considerably less. There is certainly this objection to the 'scooping out' plan, that, as all the glands at the seat of operation cannot be seen, some glands that are diseased may remain undisturbed. But, as is well known, complete extirpation of a mass of diseased glands does not protect the patient against future swelling of neighbouring glands, or caseous infiltration of the wound.

2. *Pilcher on the Ligature of Large Venous*

Trunks.—In the *Phil. Med. Times*, July 1, 1882, Dr. L. S. Pilcher of Brooklyn details three cases in which it was necessary to interfere with large veins during surgical operation. In the first case, during the removal of a large adenoma of the neck, the internal jugular vein was denuded in the middle of the neck over a space of one inch and a half, and three veins of considerable size in the mastoid region required ligation. No special antiseptic measures were applied in this case. The patient made a rapid and complete recovery, without any symptom indicating disturbance of the internal jugular vein. In the second case, the axillary vein was wounded during the removal of some carcinomatous glands from the armpit. The injured vein was at once tied above and below the wound with silk thread, the operation not having been done antiseptically. The patient when last seen, more than a year after this operation, was in apparent good health; but, although there were not any signs of recurrence of carcinoma, the arm of the affected side was affected with persistent œdema. The third case was one of suicidal wound of the internal jugular vein. The bleeding was arrested by hæmostatic forceps, which were allowed to remain for two days in order to produce permanent obliteration of the wound in the vein. The patient made a perfect recovery. Dr. Pilcher has been led to the conclusion that it is not the simple exposure of a vein which causes in any case phlebitis and thrombosis. A study of the pathology of phlebitis, it is pointed out, indicates that the cause of the occurrence of inflammation and thrombosis in denuded veins is either, and most frequently, the extension to them of inflammation from the tissues by which they are surrounded, or the violence to which their external cellular tissue has been exposed; a primary external inflammation thus being required as the necessary antecedent of the affection by extension to the inner vascular tunics. If the character of an operation and of the after-treatment of the wound be such as to make possible primary union of the raw surfaces; if no undue violence have been done to the denuded vein in the course of the operation, no fear need be entertained of the development of phlebitis. If, however, such favourable conditions cannot be secured, and the vein be placed at the bottom of a suppurating wound, or, in the course of the operation, have suffered much contusion, the probabilities of the development of disastrous phlebitis are great. The question of the ligature of a large vein is not influenced by any risks of serious interference with the return of blood to the heart. The great venous trunks are freely supplemented by collateral channels; so that, as has been abundantly demonstrated by many cases, ligature even of the internal jugular vein is not likely to be attended by any permanent inconvenience to the cerebral circulation. The chief dangers to be apprehended from the application of ligatures to veins are inflammatory in character. In the vast majority of cases this inflammation is simple and circumscribed, and there is no special vulnerability in the venous tissues. When diffused phlebitis does occur, it is to be attributed to the general constitutional conditions of the particular patient. It follows then, Dr. Pilcher goes on to state, that since, in general, little fear is to be apprehended of disastrous inflammatory complications following the application of a ligature to a vein, it would be better, in those cases in which in the course of an operation a vein has suffered much contusion, or if its continued exposure at the bottom of a suppurating wound be unavoidable, that the vein should be excised

rather than be left to the more imminent danger of thrombosis. Dangers from the use of the ligature, it is asserted, are too remote to cause any hesitation in its employment, or to be permitted to embarrass the needed thoroughness in the removal of any growth. To lessen the disadvantages and possible dangers of the continuous irritation set up by the silken ligature, Dr. Pilcher advocates the substitution of pressure-forceps. Experience, he states, has demonstrated that the continuous application of these, for from two to four days, is sufficient to secure the permanent sealing of even large venous trunks. There will be but few conditions, Dr. Pilcher thinks, in which for the arrest of hæmorrhage from veins, the use of such forceps will not be found superior to that of the ordinary ligature; they produce less local irritation, no ulceration, and division of constricted tissues, and their application is for a very much shorter period of time. Dr. Pilcher holds that, by the use of carbolised animal ligatures, and with proper antiseptic precautions in operating, all irritation and inflammation might be prevented in the ligature of a vein, and the primary union of wounds secured. Some experiments, recently made by Dr. Pilcher and Dr. George R. Fowler, point to these conclusions: that repair in the case of veins that have been tied with antiseptic catgut is secured, first, by the absorption of that part of the inner coat compressed by the ligature; secondly, by the fusion or organic union of the opposed middle tunics; thirdly, by the incorporation into the outer tunic of the substance of the ligature: that this repair is perfect without the intervention of any clot: that a thrombus in the *cul-de-sac* of the vein is not always present: and, finally, that throughout the whole process there is no inflammation either of the vein or of its investing connective tissue.

3. *Kinloch on Aneurism of the Posterior Tibial Artery*.—Dr. R. A. Kinloch of Charleston puts on record, in the *American Journal of the Medical Sciences*, July 1882, a case of supposed spontaneous aneurism of the left posterior tibial artery in a male patient, aged 45. At the back of the left leg was a large swelling, which had commenced, without known provocation, about three years before the case came under the notice of Dr. Kinloch. This swelling was semi-solid, indistinctly fluctuating to the touch, and was not influenced by the interruption of the flow of blood through the femoral artery. There was no pulsation; but, when the palms of the hands were made to bear firmly upon a large extent of surface at about the region of the greatest circumference of the limb, a slight upheaving, or rather an excentric movement of the mass, was recognised, which was not perceived when the flow through the femoral was cut off by pressure at the groin. No *bruit* could be made out. The author diagnosed an aneurism most probably of the posterior tibial artery, or possibly of the lower portion of the popliteal, which had recently become diffused or false, and the sac of which was filled with fibrin and coagula. Doubts were entertained by others as to the correctness of this diagnosis, and opinions varied as to the existence of an encephaloid or sarcomatous growth, or a pulsating tumour of bone. The femoral artery was tied with very little permanent benefit and relief to the tension of the tumour, save some subsidence of œdema of the leg. One month later an incision was made into the swelling, and then, in consequence of the serious hæmorrhage which at once resulted, amputation was performed just above the knee. On dissection of the removed limb, the case proved to be one of

aneurism of the posterior tibial, about two inches below its origin. The artery was pervious both above and below the opening into the sac. It had been fed by collateral vessels entering the femoral, below the point of ligature. At the end of his article Dr. Kinloch records all the cases of spontaneous aneurism of the posterior tibial artery he has been able to find in surgical literature. The term *spontaneous* he uses simply to imply that, in the cases reported, there is a want of reasonable proof of origin from injury. The fact is recognised that, upon a close investigation of the history of all the admitted spontaneous or true aneurisms of the larger arteries, there is frequently found attached to this some antecedent blow or some undue exertion. Dr. Kinloch doubts whether, in the strictest pathological sense, there is ever a spontaneous aneurism of the posterior tibial. Deligation, though deemed worthy of trial, was not regarded as a very promising measure. The double ligature to the posterior tibial itself would, it is acknowledged, have been the most thoroughly surgical operation, but in the state of the limb this could hardly have been accomplished, and most certainly not without opening the sac. It is held that there would not have been any cure in this case if the sac had not been interfered with, as the full establishing of the collateral circulation would have brought on renewed trouble and progressive disease. The dissection proved that the artery was pervious above and below the sac, and that it received an abundant supply of blood.

4. *Bæckel on the Operative Treatment of Genu Valgum*.—In a section of a memoir on osteotomy (*Revue de Chir.*, No. 6, 1882), M. Jules Bæckel of Strasbourg deals with the subject of the treatment of genu valgum. In adult subjects this affection, it is held, may be best treated by osteotomy. Attempts to straighten the distorted limb by manipulation, or the use of orthopædic appliances, are liable to result in failure, and may cause serious complications, as arthritis, injury to the popliteal nerves, and rupture of the external lateral ligament. The author, rejecting the intra-articular operations of Ogston and Reeves, thinks that Macewen's proceeding is preferable to others. After this, he would rank linear osteotomy of the tibia, an operation from which useful results may be obtained in cases that are not very severe. This operation is more simple and much less serious than that of Macewen. The portion of bone to be divided is more superficial, injury to the articulation is impossible, and there is no risk of hæmorrhage. It is, however, seldom applicable, as the femur is much more frequently in fault than the tibia. Cuneiform osteotomy, though with antiseptic precautions almost quite free from danger, ought to be reserved for cases that are quite exceptional. The author is of opinion that in osteotomy the section of the bone should be complete, and he objects to the practice of cutting through about two-thirds of the thickness of the bone, and breaking down the remaining portion. Splintering of the bone, it is stated, is apt to be thus produced, and the fragments may necrose, and give rise to complications that might have been readily avoided by complete section. In dividing the bone, M. Bæckel uses two chisels, a large one for the more superficial parts, and one of less size for going through the remaining thickness of the osseous cylinder. He thinks it advisable not to stitch up the wound in the soft parts, notwithstanding the success that has been obtained by M. Beaugregard from the practice of completely occluding the wound. It is considered risky to close a wound completely after

osteotomy. It is held that, when sutures are applied, drainage is necessary and indispensable. When the wound is not closed by sutures, a drainage-tube may be dispensed with.

5. *Grünberg on a Case of Obturator Hernia.*—The subject of this case, reported by Dr. Grünberg of Stralsund (*Deutsche Zeitschrift für Chirurgie*, Band xvii, Heft 1 and 2), was a woman aged sixty-five, who, during the three days before she came under observation, had suffered from well-marked and very intense symptoms of intestinal strangulation. No swelling could be made out at any of the usual seats of hernia, but on close examination it was found that pressure just below the left groin and over the pectineus muscle caused great pain. A vertical incision, about three inches in length, commencing just below the horizontal ramus of the os pubis, was carried downwards, at a distance of an inch and a quarter from the outer border of the adductor longus. On exposure of the surface of the pectineus, no swelling nor abnormality was observed; but on raising the outer margin of this muscle, and drawing it inwards, a hernial tumour of the size of a large hazel nut was revealed. After incision of the wall of the sac on a director, a small loop of intestine came to view, which though very lightly constructed, and of a dark blue colour, presented a smooth and shining surface, and had evidently not become gangrenous. For fear of wounding the obturator artery, the pulsations of which could be felt by the finger, the knife was not used for overcoming the stricture. The orifice constricting the neck of the hernia was dilated by the fore-finger being carried along the outer and lower portion of its circumference, and also by breaking down some of the fibres of the obturator membrane. All the symptoms of strangulation ceased immediately after the operation, and on the eighteenth day the patient, though feeble, was regarded as cured. Two days later, however, according to a postscript to this report, she died suddenly with symptoms of collapse, in consequence of perforation of intestine. Dr. Grünberg states that it is not clear to him why almost all the writers on obturator hernia have reported its diagnosis as being very difficult. He holds that the diagnosis of a strangulated obturator hernia is not more difficult than that of a strangulated femoral hernia. No tumour, it is true, is to be seen or felt, but then there is always characteristic pain. In some instances there is lancinating pain caused by pressure on the obturator nerve. In Dr. Grünberg's case any attempt at active flexion of the thigh excited very intense pain, and the patient complained of constant painful and pricking sensations extending down the inner side of the thigh. This pain, due to pressure on the nerve, however, is not always felt in cases of obturator hernia, and is frequently complained of by the subjects of uterine disease, and also by hysterical women. The characteristic pain of strangulated obturator hernia, and that by which the diagnosis may be readily and surely established, is the tenderness complained of when pressure is made over the pectineus muscle. This tenderness, the region of which is very limited in extent, is so intense that the patient screams when it is excited, and, if under the influence of an anæsthetic shrinks on pressure over this tender part. When this characteristic pain over the locality of the obturator canal can be made out in association with symptoms of intestinal strangulation, Dr. Grünberg holds that one may safely diagnose obturator hernia. On the other hand, in absence of such pain he would decide with equal

confidence against the existence of this affection. Notwithstanding the success that attended non-operative treatment in the well-known case reported by Roser in 1845, Dr. Grünberg would not expect much from the taxis in any case of strangulated obturator hernia; the hernial tumour is so very small, and reflex contraction of the surrounding muscles is so liable to be set up on manipulation. If not strangulated, the hernia might return spontaneously under the influence of alternating natural contraction and relaxation of the adductors and flexors of the thigh. The operation for relief of the hernia, when strangulated, if performed early, is free from danger. Dr. Grünberg recommends that in order to avoid bleeding from the muscular vessels, the pectineus, instead of being partially divided, should be raised, and then dragged inwards by blunt hooks. Should the hernial tumour be large, so as to necessitate division of the muscle, it is recommended that it be separated at its origin from the ramus of the pubis by the use of a tenotome. The constriction, it is held, may usually be overcome by passing the tip of the fore-finger with a gentle boring movement between the neck of the sac and the membranous portion of the constricting ring, dilatation being effected partly through yielding of the obturator membrane, and partly through the tearing of some of its fibres. Hæmorrhage from the obturator artery will thus be avoided. If the superficial incision be made according to Dr. Grünberg's directions, there is no danger, he says, of wounding the internal saphenous vein. The incision he recommends is one about three inches in length, commencing just below the horizontal ramus of the pubis, at a point about one inch and a quarter to the outer side of the origin of the stretched adductor longus, and carried directly downwards over the outer margin of the pectineus. W. JOHNSON SMITH.

6. *Murdoch on the Removal of Plaster-of-Paris Bandages.*—Dr. F. H. Murdoch of Bradford, Pennsylvania, says (*Nashville Jour. of Med. and Surg.*) that a very convenient way to remove a plaster-of-Paris bandage is as follows. Take a strong solution of nitric acid, and, by means of a camel-hair pencil, paint a strip across the bandage at the most desirable point for division. The acid will so soften the plaster, that it may be readily divided by means of an ordinary jack-knife.

7. *Levis and Morton on the Treatment of Transverse Fracture of the Patella.*—At the recent meeting of the American Surgical Association, Dr. R. J. Levis read a paper on fracture of the patella (*Med. Bull.*, July). He first called attention to the fact that, the patella not being a symmetrical bone, it was hard to make any well-fitting appliance to it. Then, again, as it has no natural depressions to which to apply force, the application of such force creates unnatural depressions. Thus, pressure upon the angular edges above and below tends to cant the fragment upwards; and, even if it could bring the lower edges of the fracture together, it would separate the upper edges. The result of ligamentous union is apt to be lameness, inability to use, and mistrust of, the injured leg. Bony union is very rare. It has been doubted if it ever occurs. With the ordinary apparatus he did not believe it could be secured. But he and Dr. Morton had for some years been using a modification of Malgaigne's hooks, with which he believed he had secured it. His own modification consisted in separating the hooks of one side from those of the other, so that they can be inserted first on one side of the fragments and then on the other. He then showed two patients who had been

treated in this way, in whom no motion could be made between the former fragments, and who had complete use of and confidence in their legs. Dr. Thomas G. Morton also read a paper on the same subject. He said that in 1873, after having always used the usual methods with satisfactory results, it occurred to him to try an old pair of Malgaigne's hooks, which had been brought from Europe, upon a patient in the Pennsylvania Hospital. To his pleasure he got what he believed to be bony union. Since then he had used the same and some modifications of them in a number of cases. He showed a pair of hooks which were so constructed that the two upper or two lower could be made to approach or recede from each other. His plan was never to put the hooks on before the fourth day. He first applied lead water and laudanum, elevated the limb, perhaps used gentle compression, until the effusion and swelling were reduced, and then etherised the patient and put in the hooks, applying a splint for twenty-four hours, just to keep the patient still till he became a little used to the hooks. He had seen no good from keeping the hooks in over sixteen or eighteen days. He had never seen any trouble whatever follow the use of them; of course, he would not pretend that this method was applicable to all cases of fracture of the patella. In comminuted fractures, for example, they could not be used. Again, if approximation could be secured by slight pressure of the fingers, there was no need to use the hooks; but when the separation of the fragment was wide, e.g., an inch and a half to two inches, then they might be used with advantage.

8. *Weist on Foreign Bodies in the Air-Passages.*

—At the recent meeting of the American Surgical Association (*Boston Med. and Surg. Jour.*, No. 24), Dr. J. R. Weist read a paper on this subject. The conclusions, which are said to have been based on above 1,000 cases, were as follows. 1. When a foreign body is lodged either in the larynx, trachea, or bronchi, the use of emetics, erhines, or similar means should not be employed, as they increase the sufferings of the patient, and do not increase his chances of recovery. 2. Inversion of the body and succussion are dangerous, and should not be practised unless the wind-pipe have been previously opened. 3. The presence simply of a foreign body in the larynx, trachea, or bronchi, does not make bronchotomy necessary. 4. While a foreign body causes no dangerous symptoms, bronchotomy should not be performed. 5. While a foreign body remains fixed in the trachea or bronchi, as a general rule bronchotomy should not be practised. 6. When symptoms of suffocation are present, or occur at frequent intervals, bronchotomy should be resorted to without delay. 7. When the foreign body is lodged in the larynx, there being no paroxysms or strangulation, but an increasing difficulty of respiration, from œdema or inflammation, bronchotomy is demanded. 8. When the body is movable in the trachea, and excites frequent attacks of strangulation, bronchotomy should be performed.

9. *Lidell on Fractures of the Skull, restricted to the Inner Table.*—In the American edition of *Holmes's Surgery*, Dr. John A. Lidell had occasion to show that cranial fractures are restricted to the inner table much oftener than has generally been supposed. Researches made for other purposes since that was written have brought to his notice fresh evidence, not only that his views were correct, but also that this lesion occurs with even a greater frequency than he had believed, and that it unquestionably should be assigned a prominent place among the traumatic

lesions of the skull, which, although not very infrequent, are very obscure or little understood, and nearly always fatal, unless promptly treated when symptoms appear. In the *American Journal of the Medical Sciences* for April 1882, Dr. Lidell presents some additional cases, together with a thorough exposition of the subject, and especially of the symptoms, diagnosis, and treatment. As regards the mode of production of this variety of fracture, he shows that, when the skull is broken by a blow of any sort, except at the frontal or any other sinus, the fracture always commences in the side of the skull opposite to that which is struck, and the blow, in whatever way produced, must not be strong enough to break both tables. As to the termination of cranial fractures restricted to the inner table, the clinical histories of the cases Dr. Lidell has collected show that the traumatic meningitis and encephalitis usually end in speedy death, unless the causes thereof, the imprisoned fragments of the inner table, are liberated and removed by the timely performance of trephining.

10. *Johnson on Skin-grafting.*—Dr. C. Johnson writes as follows on this subject in *International Surgery*, vol. i, p. 549. 1. It affords an admirable means of accelerating and facilitating cicatrization. 2. The pellicle produced by its aid is less prone to contraction, and contracts less than an ordinary cicatrix. 3. The deeper layers of the epidermic elements are the chief factors of growth. 4. The growing cicatrix is formed at the expense of the embryonic cells of the granulating surface, stimulated into activity by the presence of the living cells of the graft. 5. The stimulus first showing energy in and about central islands of new growth, induces activity at the hitherto dormant margin of the ulcer. 6. Grafts may retain vitality, and be effective, long after separation from the body. 7. Small grafts of the size of a millet-seed, for example, are generally preferable to larger ones, although much larger grafts have had their successes and advocates. 8. Grafts should be obtained from the patient himself, if possible, but in all cases the danger of specific inoculation ought to be present in the mind of the surgeon who borrows grafts from one subject for application upon another, or who practices heteroplasty. 9. Grafts furnished by the aged are less disposed to adhere than those obtained from the young, and sometimes fail entirely. 10. Grafts obtained from one race of men may be successfully used on individuals of another race; and animal grafts may be transplanted upon human beings and provoke cicatrization. 11. Foul surfaces, or those of persons in bad health, will refuse to accept good grafts; but with improvement or establishment of the health of the individual bearing an ulcer, and the appearance of healthy granulations, a favorable result of skin-grafting may be anticipated. Finally, the great benefits accruing from successful skin-grafting far outweigh its drawbacks, which are, the pain of the operation, and, unless amputated limbs be utilised, the consecutive pain in the parts yielding the grafts, whether these be autoplasmic or heteroplasmic.

11. *Brichetti on the Indications for Nephrectomy.*

—Dr. Luigi Brichetti (*Gaz. degli Ospitali*, Aug. 9) thus sums up what he considers the chief indications for nephrectomy: 1. Certain wounds of one or both kidneys; 2. Movable kidney, complicated with neuralgia; 3. Tumours of the kidney, hydro-, or pyonephrosis; 4. Renal calculi; 5. Parasites; 6. Certain affections of the ureters. In the majority of cases of pyonephritis, the author, however, would prefer large incisions into the organ, kept open with drain-

age-tubes, rather than its removal, especially after gunshot wounds.

12. *Vizioli and Butera on the Value of Cold in Aneurism.*—Drs. Vizioli and Butera have lately laid before the Medico-Chirurgical Academy of Naples the results of a series of experiments instituted by them to test the value of cold in the treatment of aneurism (*Gaz. Med. Ital. Prov. Venete*, July 2, 1882). They conclude from these that cold has little influence on the course of an aneurism, while, as a method of treatment, it is not free from many drawbacks. Its local action is not to produce, as might be supposed, a lowering of temperature sufficient to cause rigidity or condensation of the tissues, nor does it exercise any coagulating power on the blood itself. Its effect is to produce increased activity of the collateral circulation and arterial pressure, both which conditions are adverse to consolidation within the sac. The application of ice should, therefore, be abandoned as a means of treatment, both in thoracic aneurisms, and also in those of other arteries, where ligature or compression are much more radical and hopeful methods. LITTON FORBES.

13. *Nicolaysen on Resection of the Pylorus for Cancer.*—Dr. Nicolaysen of Christiania describes (*Nord. Med. Arkiv*, Band xiii; and *Med. Chir. Rund.*) the first performance in Scandinavia of the operation of resection of the pylorus for carcinoma. The operation was done in March 1881, by Professor Nicolaysen, in the Imperial Hospital at Christiania, the patient being a woman, aged 37, who had suffered for nine months from constantly increasing symptoms of constriction of the pylorus, and had become reduced to a state of extreme emaciation and weakness. The operation was performed under chloroform, the stomach having been previously washed out with a 2 per cent. solution of boracic acid. An oblique incision, 10 centimètres in length, was made parallel to the margin of the ribs on the right side, and the tumour, which was found to be free from adhesions, drawn through it. The growth measured 9 centimètres in length, and 10 centimètres in circumference at the pylorus, increasing to 23 centimètres as it approached the stomach. In the great omentum were several hard and swollen glands, situated a few centimètres from the main growth. This infiltrated part of omentum was then secured by a row of double ligatures, and cut through, the corresponding part of the lesser omentum being treated in a similar manner; the larger visible vessels were then secured by ligature, and the growth was removed by cutting through the stomach about 1 centimètre from the margin of the affected part. Six large double stitches were then passed through the cut edge of the duodenum, after thorough cleansing from mucus and remains of food, and the intestine was held well out of the way by means of them. The large wound in the stomach was then dealt with, the edges being turned inwards, and so secured by catgut stitches that the peritoneal surfaces were brought into contact, the stitches being passed only through the serous and muscular coats. One part of the wound was left open, and to it the cut end of the duodenum, its edges invaginated in like manner, was then secured. After thorough cleansing, the stomach was returned to the abdominal cavity, and the external wound closed by deep and superficial sutures, and dressed in Lister's method. The operation was followed by very slight epigastric pain, rapidly passing off, but the weakness was extreme, and, becoming collapsed, the patient

died fifteen hours afterwards. The necropsy revealed no other cause of death, the stitches were firmly secured, requiring considerable force to separate them, and the peritoneal surface was free from any appearance of inflammation. The extremely enfeebled state of the patient being borne in mind, the fatal issue of this case cannot be reasonably cited as an argument against the operation itself. That protests from certain quarters should have been made is not by any means surprising when one considers how, only one generation ago, the operation of ovariectomy was not only protested against, but, by many, roundly condemned. With respect to the details of the operation itself, this case serves to point out the advantages of the use of carbolised silk ligatures instead of catgut. In the first place, the use of catgut of necessity lengthens the time of the operation, a fact which may materially affect the prognosis; and secondly, the possibility of rapid solution of the catgut may be a source of danger in case any extraordinary strain be put upon a stitch which has become weakened in this manner. E. CLIFFORD BEALE.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BRAUN, GUSTAV.—Contributions to the Operative Treatment of Tumours of the Female Genital Organs. (*Wiener Med. Woch.*, No. 15, 1882.)
2. BREUS.—The Therapeutics of Puerperal Eclampsia. (*Archiv für Gynäkol.*, Band xix, Heft 2.)
3. DANILLO, S.—Clinical Researches as to the frequency of Diseases of the Sexual Organs in Insane Women. (*Deutsche Med. Zeitung*, 1882, No. 18.)
4. DÜVELIUS.—A Case of Extirpation Uteri Prolapsi Vaginalis. (*Centralbl. für Gynäkol.*, Aug. 1882.)
5. FISSIAUX.—On the Treatment of Uteritis in the Female by Local and Permanent Applications of Coal-Tar Soap. (*Ann. de Gynécol.*, Aug. 1882.)
6. HUCHARD, H.—Hepatic and Nephritic Colic during Pregnancy and Labour. (*Jour. de Méd. de Paris*, Aug. 26, 1882.)
7. LUTAUD, A.—Note on Membranous Dysmenorrhœa. (*Ann. de Gynécol.*, Aug. 1882.)
8. MACAN, A. V.—The Rational Treatment of Anterior and Posterior Displacements of the Uterus. (*Dublin Jour. of Med. Science*, July 1882.)
9. METTENHEIMER, C.—A Case of Mycosis of the Female Genital Organs. (*Memorabilien*, No. 1, 1882.)
10. MÜLLER, P.—Modern Cæsarean Section. (Berlin: August Hirschwald, 1882.)
11. NICOLINI, G. B.—A Successful Case of Porro's Operation. (Milan, 1881.)
12. PROCHOWNIK.—Contraction of the Pelvis. (*Centralbl. für Gynäkol.*, 29 July 1882.)
13. ROKITANSKY.—Epithelial Carcinoma of the Clitoris. (*Ibid.*)
14. SAVAGE.—On a Successful Case of Porro's Operation. (*Brit. Med. Jour.*, Sept. 2nd, 1882.)
15. SINCLAIR, A. D.—Measurements of the Uterine Cavity in Childbed. (*American Gynecol. Trans.*, vol. vi, 1882.)
16. SLOAN, SAMUEL.—On Oil of Eucalyptus in Midwifery Practice. (*Lancet*, Sept. 2, 1882.)
17. TCHUDORSKY, V. A.—On Technics of Decapitation. (*Pratch*, 1882, No. 7, pp. 98-100.)
18. SCHRAMM.—A Case of Retention of Fœtal Bones in the Uterine Cavity during One Year and Seven Months. (*Mediz. Obz.*, Jan. 1882, pp. 183-4.)

3. *Danillo on the Frequency of Disease of the Sexual Organs in Insane Women.*—Dr. Danillo examined 200 insane women, and found that 162, or 80 per cent., were suffering from various diseases of the sexual organs. Out of 140 menstruating women, between 15 and 42 years of age, only 20 were without some uterine anomaly. Out of 60 women who had ceased menstruating, between 42 and 75 years of age, 18 were the subjects of some affection of the genital organs. Acute and chronic endometritis and metritis were most frequently observed; less frequently displacement of the uterus, dysmenorrhœa, acute and chronic ovariitis, and other diseases. The above results show that the complication of psychosis with uterine disease is a frequent occurrence, and of the greatest clinical interest.

5. *Fissiaux on the Treatment of Urethritis in the Female.*—Dr. Fissiaux relates fifteen cases, in which Dr. Leblond treated blennorrhagic urethritis in the St. Lazare Hospital in the following way. A short stilette is wrapped round with cotton-wool, covered with coal-tar soap; this is passed into the urethra and retained there. It is renewed every other day. During micturition, the patient prevents it from falling out by pressing it with her finger. The rationale of the treatment is that the tampon separates the folds of the urethra from each other, and thus keeps the whole surface of the mucous membrane at rest and in contact with the medicament.

7. *Lutaud on Membranous Dysmenorrhœa.*—Dr. Lutaud, after mentioning two cases in which he saw membranous dysmenorrhœa, states that he believes: 1. that membranous dysmenorrhœa consists in an exfoliation of the hypertrophied mucous membrane; 2. that expulsion of the mucous membrane does not occur at each menstrual epoch, but there is frequently an interval of several months between each attack; 3. the disease is common in virgins, and is not the result of conception; 4. that membranous dysmenorrhœa is nearly always accompanied by sterility.

8. *Macan on the Rational Treatment of Displacements of the Uterus.*—Dr. Macan, after a critical survey of the accepted theories as to uterine displacements, concludes as follows. The normal position of the uterus, when the bladder is empty, is one of ante flexion. Hence, mechanical treatment of ante flexion is rarely called for, and, if symptoms be present, our efforts should generally be directed to the cure of the complications. In retroflexions or versions, the primary indication is to treat the displacement. In order to do this effectually, we should place the uterus in a position of exaggerated anteversion, and then fix the cervix posteriorly by a pessary. Hodge's pessary, or any other pessary used for the cure of retroflexion, when uncomplicated with adhesions, should act by fixing the cervix posteriorly, and not by pressing against the fundus and elevating it. Versions are, so far, more serious than flexions, in that they are caused by rigidity of the uterine parenchyma, which is generally due to chronic metritis. To make the results of the bimanual examination of any use for comparison with the results of other observers, it must be made in the dorsal position, the bladder having been previously emptied. A great deal of the confusion that exists about the treatment of anterior and posterior displacements originates in its being taken for granted that any treatment that is found suited to an anterior displacement, must be equally suited to a posterior one, and *vice versa*. Dr. Macan has not entered into the consideration of posterior displacements when complicated with fixation of the fundus

in the above paper. [Dr. Macan's theory of fixing the cervix by putting the posterior *cul-de-sac* on the stretch appears untenable, inasmuch as all the pelvic organs are continuously moving with each inspiration and expiration.—*Rep.*]

11. *Nicolini on a Successful Case of Porro's Operation.*—Dr. Nicolini, after relating a case in which he performed Porro's operation with success to mother and child, states that the proposal of Professor Malachia De Christoforis, to abolish the supra-vaginal amputation of the uterus after the Cæsarean section, and to substitute for it the total extirpation of the uterus by the Freund-Kochs method, is unwise. He thinks that De Christoforis exaggerates the danger from suppuration of the pedicle. Dr. Nicolini thinks the difficulties of removing the whole uterus, after Cæsarean section, far outweigh any inconvenience in treating the uterine pedicle. He also disapproves of Müller's modification of extracting the uterus through the abdominal wound previously to incising it. He considers the operation of Porro more simple, and safer to the patient than either of the above modifications.

14. *Savage on a Successful Case of Porro's Operation.*—Dr. Savage was called by Dr. Clement Dukes of Rugby to a lady aged 25. She had been almost constantly vomiting for some days. There was a very hard tumour, reaching to the umbilicus. The cervix felt a little soft and open. The diagnosis was that it might be an extra-uterine gestation, a myoma, or an ovarian tumour with the addition of intra-uterine gestation. An incision, nine inches long, was made through the abdominal wall. The tumour was found to be a large solid fibro-myoma. The cavity of the uterus was found to contain a fetus, and was pushed upwards and to the left. The right ovary and Fallopian tube were in front of the tumour, and almost black from compression between it and the abdominal wall. The whole mass was removed, the stump was secured by a wire clamp, and its serous outer surface was attached by silk to the abdominal wound. Two thick silk ligatures were also tied round the stump for security. A glass drainage-tube was inserted just above the stump, which was mopped over with perchloride of iron. After the operation, which lasted about an hour and a half, the finger passed into the vagina detected the cervix high up, but otherwise normal, showing that the wire had encircled the uterus at or about the level of the inner os, and had not included any of the vaginal roof, with danger to the uterus. The mass removed weighed nearly nine pounds, and contained the fetus with membranes intact. The patient completely recovered under the care of Dr. Clement Dukes. The breasts secreted milk on the fourth day. The clamp came away on the twenty-first day. Dr. Savage states that, as far he knows, this is the second time that Porro's operation has been successfully performed in this country. He is of opinion that the extraperitoneal is the best method of dealing with the stump. [This case hardly comes within the category of Porro's operation. As we understand it, Porro's operation implies Cæsarean section, at term or late in pregnancy, followed by amputation of the uterus and its appendages through the cervix uteri, and undertaken because delivery cannot safely be effected *per vias naturales*. Certainly this is what Porro himself initiated. If, however, the removal of a fibroid tumour of the uterus, undertaken independently of a possible pregnancy, or in ignorance of the existence of one, complicated by early pregnancy, is to be classified as a Porro's operation, then

Dr. Savage is by no means the first to have performed that operation in this country. On Jan. 7th, 1877, Dr. Robert Barnes, assisted by Dr. Braxton Hicks and Dr. Fancourt Barnes, removed a large fibroid uterus, part of which had become wedged under the sacrum, and was causing such distress that an operation was necessary. When the tumour was removed, the pelvic portion was found to be gangrenous. On opening the mass of the tumour, a two-and-a-half months' foetus was discovered in the uterine cavity. We did not, however, on that account regard the operation as one after Porro. The uterus is in St. George's Hospital Museum, with the contained ovum. It is figured p. 792 in Barnes's *Diseases of Women*, 2nd edition.—*Rep.*]

16. *Sloan on Oil of Eucalyptus in Midwifery Practice*.—Dr. Sloan objects to carbolic acid as an uterine disinfectant, that it cannot be used continuously; as, 1. in the quantities required it would be poisonous; 2. It would cause severe irritation, and thus prevent the healing of lacerations; 3. It would coagulate the lochial discharge, causing its retention even within the uterus; 4. To many patients it has a decidedly sickening odour. When Mr. Lister, in May 1881, recommended oil of eucalyptus as a substitute for carbolic acid where the latter was inadmissible, it occurred to Dr. Sloan that this substitute might be employed more extensively in midwifery practice than had been considered safe with carbolic acid. Since then, Dr. Sloan has put it to the test, and has found its advantages to be the following. 1. It is non-poisonous; 2. In the quantity and strength required it is unirritating; 3. It does not coagulate the lochia, which, by separating the lips of the vulva, can be seen to flow out in a liquid stream; 4. Its odour is, with rare exceptions, a pleasant one; 5. It seems to act as an uterine stimulant, causing and assisting to maintain uterine contraction. Formed into a pessary of a suitable shape and size, it is easily applied to the neighbourhood of the os and maintained there. To secure this, the pessary must be broad and short, must melt slowly but completely, and must contain a large percentage of the antiseptic oil. These requirements are supplied in the following formula. Take oil of eucalyptus, six drachms; white wax, four drachms; cacao butter, four drachms. Mix, and divide into twelve pessaries. One of these must be applied night and morning, immediately after the usual sponging; and, though the napkins are frequently changed, the odour will be quite perceptible on the one removed prior to the next sponging twelve hours later. Though uncertain as to the fact of a material absorption of the oil into the system, Dr. Sloan is persuaded that the oil does not remain at the os, but freely passes into the cavity of the uterus. For it is admitted that the uterus, for several days after labour, is in a state of alternate contraction and relaxation; and, whilst during contraction it will empty itself, during relaxation again, whatever is lying at the os, or upper part of the vagina, will be sucked into the vacuum produced. The eucalyptus will, therefore, find its way into the uterine cavity. In hospital practice, Dr. Sloan uses the pessaries in all cases; in private practice, in those cases only requiring special treatment from the first. In one case of pyæmia, the oil of eucalyptus, in the proportion of five minims to twenty minims of olive oil, was used hypodermically every hour. In this case the patient was nearly dying, but rallied under the oil of eucalyptus.

FANCOURT BARNES, M.D.

17. *Tchudovsky on Decapitation*.—Differing from other authors, Dr. Tchudovsky (*Vratch*, 1882, No. 7) considers the death of the child in cases of neglected transverse presentations as an absolute indication for embryotomy, *i.e.*, decapitation. The treatment by podalic turning he advises exclusively in those rare instances in which it may be performed very easily. Looking for the easiest and most convenient method of decapitation, the author repudiates the use of Schultze's sickle-shaped knife (much praised of late by Professor Küstner of Jena) and of Dubois' decapitating scissors, because of their difficult management and the danger to the mother, and joins Drs. Pawlik, Schanta, and E. Bidder, in defending Braun's blunt hook. In the use of this, which he regards as the best decapitating instrument, Dr. Tchudovsky recommends the operator to grasp with the hand the integuments of the child's neck, to cut the fold with scissors, to separate the skin as high as possible by means of finger in the wound, and then to introduce Braun's hook, which now very easily passes under the skin, and easily cuts through muscles and spine, after a very few rotatory movements and tractions downwards. To complete the operation, it remains only to divide the integuments by ordinary blunt-pointed scissors. The author claims the following advantages for his subcutaneous method. 1. It greatly diminishes the force required for rotating and dragging the hook downwards. 2. It prevents the instrument from slipping off. 3. It obviates all possibility of injuring the surface of the uterus.

18. *Schramm on a Case of Nineteen Months' Retention of Fetal Bones in the Uterus*.—Dr. Schramm describes (*Med. Oboz.*, January 1882) the case of a woman aged 32, married twelve years, who had had eight labours, the first four of which had been normal; the last four had come at full term, but the children were born dead. The last labour was very difficult and lasted nearly four days. No *post partum* hæmorrhage followed, but the placenta, as well as all the cranial and some of the vertebral bones of the macerated foetus, remained in the uterine cavity. Some weeks afterwards, there was an offensive discharge from the vagina, and, four months later, urine. During the last six or seven months, the patient occasionally found small pieces of bone in her vaginal discharge. Having been called to see the patient nineteen months after her last labour, the author found her health deteriorated; there were fever, abdominal pains, constipation, and highly foetid discharge; the uterus was low down, and the os open, easily admitting a finger. The latter immediately came into contact with several friable bones of various size. The removal of them was accomplished without any difficulties, hæmorrhage being slight. A vesico-uterine fistula existed. The general state of the patient soon began to improve, and the discharge of urine through the vagina considerably lessened. V. IDELSON, M.D.

ANATOMY.

RECENT PAPERS.

1. REIN.—The Fundamental Nervous Plexus of the Uterus. (*Bull. de la Société de Biologie.*)
2. AYRES.—The Development of the Cornea. (*New York Med. Jour. and Obstet. Rev.*, May.)
3. WOLFF.—The Nerves of the Cornea. (*Archiv für Microscop. Anat.*, Band xx, Heft 3.)

4. WOLFF.—Free Endings of Sensory Nerves. (*Ibid.*)
 5. LUCAS.—Hereditary Tendency to the Production of Supernumerary Digits. (*Guy's Hosp. Rep.*, vol. xxv.)

1. *Rein on the Fundamental Nervous Plexus of the Uterus.*—M. Rein of St. Petersburg (*Bulletin de la Société de Biologie*) states that he has specially studied the fundamental plexus of the uterus, because, both physiologically and clinically, an exact knowledge of this plexus is of great importance. His description of the plexus is as follows. 1. The general features of the fundamental plexus of the uterus do not differ from those of other organs composed of non-striated muscles. 2. It is extra-uterine, and is situated principally in the cellular tissue which surrounds the vagina, just where the hypogastric plexus anastomoses with the branches of the sacral nerve. 3. This plexus presents a large number of ganglion-cells. In the plexus of the guinea-pig, these cells constitute more than a hundred ganglia of different dimensions. 4. The ganglia are generally situated on the track of the principal efferent and afferent nerve-bundles of the plexus. There are a certain number of small ganglia also scattered about in the network of the plexus. 5. The hypogastric, sacral, uterine, and vesical ganglia, and also those of the fundamental plexus, can be recognised according to the position they occupy. 6. The uterine ganglionic cells of the guinea-pig and the rabbit are limited above by the horns of the uterus. Inferiorly, the fundamental uterine plexus mixes with the vaginal plexus. None of the fibres, either of the pneumogastric or of the sacral nerves, pass into the uterus until they have mixed with those of the fundamental plexus.

W. VIGNAL.

2. *Ayres on the Development of the Cornea.*—In an article on the development of the eye (*New York Med. Jour. and Obstet. Rev.*, May 1882), Dr. William C. Ayres considers the capsule of the lens, the blood-supply of the foetal eye, the zonula ciliaris and the corpus vitreum, and the cornea and the anterior chamber. To put the development of the cornea briefly, he says that, after the lens sinks into the secondary ocular vesicle, the mesoderm comes in from all sides and takes up the previous position of the tissue which the lens carried in front of it. The tissue of the mesoderm comes in in bulk, and therefore the cornea has both cells and intercellular substance from the very beginning. When first pushed in, the tissue has its cells indiscriminately scattered about through it, just as they are in the mesoderm, but subsequently they disappear in a zone just under the epithelium, and a clear membrane is produced, which is afterward transformed into the membrane of Bowman. The same takes place below, and the membrane of Descemet results. The epithelium of the cornea is from the original ectoderm, the endothelium, formed from the cells of the mesoderm which are situated in this locality. The author considers the tendency to speak of the cells on the membrane of Descemet as epithelium to be incorrect, since the term ignores their method of formation. The peculiar process used by nature in the formation of the anterior chamber (the production of holes and meshes) is not unique. In the formation of the joints and some of the cavities in the abdomen we meet with the same device.

3. *Wolff on the Nerves of the Cornea.*—Dr. Wolff (*Archiv für Mikroskop. Anat.*, Band xx, Heft 3) states that the nerves of the cornea are enclosed

in a medullary sheath, which differs from the medulla of other nerves in so far as it does not contain fatty substance. He also states that some nerves terminate in the substance of the cornea in free points.

4. *Wolff on Free Endings of Sensory Nerves.*—Dr. Wolff (*Ibid.*) describes free terminations of sensory nerves in connective tissue and in epithelium. The medullary sheath becomes finer, and at last the axis-cylinder projects as fine free fibrillae. He believes that the sheath of Schwann becomes incorporated with the surrounding connective tissue. The preparations on which the author bases his views were obtained by the use of potassium, and gold chloride in weak solution (1 : 5000 to 1 : 2000), and exposure to light in acidulated water.

5. *Lucas on Hereditary Tendency to the Production of Supernumerary Digits.*—In Vol. xxv of *Guy's Hospital Reports*, Mr. R. Clement Lucas gives a genealogical table of a family in which supernumerary fingers and toes can be traced through five generations. This abnormal development was transmitted through the maternal great grandmother and mother to the man who furnished Mr. Lucas with the history, and whose children were also affected. This great grandmother, Mr. Lucas states, appears to be responsible for abnormalities occurring in no fewer than twenty-four persons out of a total of eighty descendants, or thirty per cent. of those carrying her blood. The maternal grandmother had a family of eight, five of whom were affected, viz., two sons and three daughters. Her eldest son, though himself normal, had three children affected out of a total of nine. The second son, who had six toes on each foot, had seven children, three of whom were affected. The third son, and his family of seven, escaped. The fourth son, who had not any family, had six toes on each foot, and was the subject of hare-lip. The eldest daughter, who had six toes on each foot, had four sons and a daughter: of this family, two sons, the first and fourth, had extra toes. The second daughter had an extra finger on each hand. She had a family of ten, of which two only were affected—a son and a daughter. The third daughter, the mother of Mr. Lucas's informant, had an extra finger on each hand. This member of the family gave birth to seven children, five sons and two daughters, three of whom were abnormal. The fifth, who came under Mr. Lucas, had six toes on one foot, seven on the other, with the inner toes webbed, five fingers and a thumb on one hand. His eldest son had hare-lip and cleft palate, and a web between the first and second toes in each foot. The youngest son was born with five fingers and a thumb on each hand, six toes on each foot, and a web between all the toes. The second, third, and fourth children, two girls and a boy, escaped.

W. JOHNSON SMITH.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. SCHIFFERS.—A Tubercular Cavity in the Larynx, in a Patient the Subject of Cancer in the Stomach. (*Ann. de la Soc. Méd.-Chir. de Liège*, June 1882.)

2. TORDEUS.—A Case of Catarrhal Croup. (*Jour. de Méd., de Chir., et de Pharm. de Bruxelles; Rev. Mens. de Laryngol.*, Sept. 1882.)

3. MASSUCCI.—On Fracture of the Cricoid Cartilage. (*Arch. Ital. de Laringol.*, Anno 1. Fase 3, 1882.)
4. COZZOLINO.—The Transmissibility of Diphtheria from the Fowl to Man. (*Ann. des Mal. de l'Oreille, du Larynx*, etc., March 1882.)
5. WARD.—Paresis of the Vocal Cords. (*Arch. of Laryngol.*, April 1882.)
6. WHIPHAM.—A Case of Aneurism of the Aorta Causing Bilateral Paralysis of the Vocal Cords. (*Brit. Med. Jour.*, May 13, 1882.)
7. HERING.—Mechanical Treatment of Stenosis of the Larynx. (*Ann. des Mal. de l'Oreille, du Larynx*, etc., May and July 1882.)
8. LEFFERTS.—A New Classification for the Motor Affections of the Larynx. (*Arch. of Laryngol.*, April 1882.)
9. SEMON.—Œsophageal Carcinoma in a Goitrous Patient. (*Ibid.*)
10. PORTER.—Obstruction of the Nares a Cause of Asthma. (*Ibid.*)
11. RUMBOLD.—The Relation of Nasal Catarrh and Nasal Polypi to Asthmatic Symptoms. (*Ibid.*)
12. WALB.—The Etiology of Nasal Bleorrhœa. (*Rev. Mens. de Laryngol.*, June 1882.)
13. VOLTOLINI.—Operations on Nasal Polypi by means of the Sponge. (*Monats. für Ohrenheilk.*, No. 1, 1882.)
14. SCHAEFFER.—Nasal Polypi. (*Wien. Med. Woch.*, No. 23, 1882.)
15. GENTILHOMME.—Employment of Sulphate of Atropine in the Treatment of Coryza. (*Rev. Méd. Française et Étrangère*, July 1, 1882.)
16. BENNETT.—Laryngeal Fistula, probably of Lupoid Origin. (*Dublin Jour. of Med. Science*, July 1882.)
17. MUSSER.—Enchondroma of the Larynx. (*Philadelphia Med. Times*, May 6, 1882.)
18. MAURER.—Extirpation of the Larynx. (*Berl. Klin. Woch.*, Nos. 26, 27, 1882.)

1. *Schiffers on a Tuberculous Cavity in the Larynx in a Patient the Subject of Cancer of the Stomach.*—The patient, whose larynx was shown by Dr. Schiffers at the Medico-Chirurgical Society at Liège (*Ann. de la Soc. Méd.-Chir. de Liège*, June 1882), had suffered from pulmonary tuberculosis, but had complained equally of gastric troubles. The posterior third of the left vocal cord was swollen and immovable; the right cord also was paralysed. At the *post mortem* examination, besides the usual tubercular lesions in the lungs, a cancerous tumour was found in the stomach near the pylorus, causing such a narrowing of this orifice as hardly to admit the tip of the little finger. The mesenteric glands were swollen and often caseous. The larynx presented a large tuberculous cavity affecting, principally, the posterior part of the left vocal cord.

2. *Tordeus on a case of Catarrhal Croup.*—In remarking on this case (*Journ. de Méd., de Chir., et de Pharmacologie de Bruxelles: Revue Mensuelle de Laryngologie*, etc., Sept. 1882), Dr. Tordeus proposes the following division to avoid the confusion which exists among croupous affections. (1) Nervous croup, or simple catarrhal laryngitis (false-croup; stridulous laryngitis). (2) Catarrhal croup, or serous mucopurulent laryngitis. (3) Croup, properly called, or pseudo-membranous non-contagious laryngitis. (4) Diphtheritic croup, or contagious pseudo-membranous laryngitis.

3. *Massucci on Fracture of the Cricoid Cartilage Recovery.*—This case is related in the *Arch. Ital. di Laringologia*, anno 1, Fasc. 3, 1882. A woman, aged 55, received a blow upon the anterior region of the neck. When she recovered consciousness, she had lost her voice. On examination, made some time afterwards, a depression was found in the right

lateral region of the neck, and the larynx appeared to deviate from the middle line. Dr. Massucci convinced himself that there had been fracture of the cricoid cartilage, now in process of cure by the formation of callus. A slight laryngitis was present, which yielded to treatment, and the aphonia then disappeared. Dr. Massucci, having consulted the literature of the subject, and made several experiments on dogs and the dead body, arrives at these conclusions. 1. Fractures of the cartilage of the larynx are rare. 2. Force, to produce them, must act under special conditions; and the cartilages must be ossified. 3. If ossification have not taken place, all the symptoms of a fracture may be present, but, on examination, lesions of other tissues only are found. The following conditions, besides ossification, favour the occurrence of fracture: (1) Force coming into contact with the larynx directly from before backwards. When applied laterally or from above downwards, or from below upwards, the larynx will only be bruised. (2) Force applied whilst the larynx is held immovably in position by the simultaneous action of the various muscles attached to it. Opinions held as to the production of fracture by strangulation are contradictory. The author, from his experience, believes that it is never produced by strangulation, except when the cartilage is ossified. Statistics of authors prove that the cricoid cartilage is most often fractured. Dr. Massucci thinks that crepitation is not a certain indication of fracture, as it may be due to the rubbing of the larynx against the vertebral column.

4. *Cozzolino on the Transmissibility of Diphtheria from the Fowl to Man.*—The author relates (*Giornale Int. delle Sci. Med.; Annales des Maladies de l'Oreille, du Larynx*, etc., March 1882) a case of localised diphtheria in the anterior region of the mouth in a child twenty months old, with swelling of the submaxillary and submental glands. Fever was the only general symptom. The glands suppurated, and the pus was discharged through the auditory passages. Dr. Cozzolino believes that this case had some connection with an outbreak of diphtheria among the fowls of a neighbouring farm. The child had a predisposition to contagion (she had just recovered from typhoid fever) and the affection was located in just the same parts as in fowls affected by diphtheria.

5. *Ward on Paresis of the Vocal Cords.*—Dr. Ward (*Archives of Laryngology*, April 1882) summarises as follows. 1. The arytenoideus muscle is the principal agent in the production of the affection styled paralysis of adduction. 2. Elliptical paralysis is caused by a paresis of the crico-arytenoidei laterales, through the inability of the latter bodies to revolve the arytenoid cartilages inward when approximated. 3. The thyro-arytenoidei are the only relaxors of the vocal cords, and the type of paralysis produced by these muscular bodies is characterised by a perpetual tension of the vocal bands when adducted. 4. The crico-thyroids are the only vocal tensors, and a paralysis of these latter muscles is manifested by the cords being permanently relaxed when approximated.

6. *Whipham on a Case of Aneurism of the Aorta causing Bilateral Paralysis of the Vocal Cords.*—The patient (*Brit. Med. Jour.*, May 13th, 1882) was 55 years old. There was a history of alcoholic excess, but not of syphilis. Two months before admission he was taken with hacking cough and pain in the

thorax and epigastrium. The signs of aneurism were not well marked, but the laryngoscope showed complete paralysis of both abductors of the vocal cords. Dyspnoea became so urgent that tracheotomy had to be performed, but without any relief, and the patient died two hours after the operation. On *post mortem* examination, a huge aneurism of the descending aorta was found flattening out the left recurrent nerve, but the right nerve was at some distance and apparently unaffected. The cardiac plexus, however, had been compressed between the displaced trachea and the aorta. Two similar cases are reported in the *Transactions of the Pathological Society* (vols. xxiii, xxiv), but in neither was there a note of any pressure on the cardiac plexus having been observed.

7. *Lefferts on a New Classification of the Motor Affections of the Larynx*.—The following classification is submitted by Dr. Lefferts (*Archives of Laryngol.*, April 1882), who suggests that a rearrangement and a greater simplification of the entire subject of neuroses and motor affections of the larynx is desirable, not only for present purposes of discussion and investigation, but also in view of the needs of the student. '1. Motor paralyses of the larynx, the result of complete, usually acute, morbid implication of the nerve-centres, or of the main nerve-trunks, the lesion being either unilateral or bilateral, and the vocal cord or cords assuming the cadaveric position. 2. Motor paralyses of the larynx, the result of incomplete, usually slowly progressive, lesion of either the nerve-centres, or, more commonly, of the nerve-trunks in their course; certain nuclei of the former, or certain fibrils of the latter, alone being implicated, certain muscles alone are paralysed. The abductor muscles of the glottis possessing a peculiar proclivity in this respect, and practically being the only ones thus affected, the lesion may be unilateral or bilateral. 3. Motor paralyses of individual muscles of the larynx, the result of implication of certain peripheral nerve twigs by local or intralaryngeal lesions. 4. Motor affections of single or groups of laryngeal muscles, the result of simple myopathic change in said muscles of a degenerative character. 5. Motor paralyses, functional in their nature, the adductor muscles being the ones commonly affected, the abductors very rarely.'

10. *Porter on Obstruction of the Nares as a Cause of Asthma*.—In a paper on this subject (*Archives of Laryngol.*, April 1882), Dr. Porter draws the following conclusions. Reflected irritation from nasal obstruction may be the exciting cause of asthma. In long continued asthma from this cause, local bronchial lesion may result. In such a case, removal of the nasal obstruction may not entirely relieve the asthma. Removal of the cause of reflex irritation is necessary to a cure of the asthma.

11. *Rumbold on the Relation of Nasal Catarrh and Nasal Polypi to Asthmatic Symptoms*.—Dr. Rumbold reports (*Archives of Laryngol.*, April 1882) several interesting cases to show the close relation between nasal disease and affections of other parts of the respiratory apparatus. He states that every asthmatic patient he has seen has nasal irritation, which, if relieved, will have a tendency to relieve the attacks of asthma. He bases this assertion on the observations he has made during the last twelve years on over fifty patients. From each of these patients he has learned that they had had severe colds each spring and autumn for a number of years. The characteristic shortness of breath

(which is, indeed, asthma in its first stage), suffered by catarrhal patients who are corpulent, has been constantly relieved by Dr. Rumbold by a thorough yet mild treatment of the pharyngo-nasal and nasal cavities.

12. *Walb on the Etiology of Nasal Bleorrhœa*.—The author (*Rev. Mens. de Laryngol.*, June 1882) reports a case where a purulent and foetid secretion from the nose was set up by a carious tooth, and ceased on its extraction.

13. *Voltolini on Operations on Nasal Polypi by Means of the Sponge*.—The author relates a case (*Monats. für Ohrenheilk.*, No. 1, 1882) of nasal polypus, in which, other means having failed, he had recourse to the method he had previously adopted for removing laryngeal polypi. To a small sponge he attached a strong doubled thread, and, with Bellocq's sound, passed one of the threads through the nostril, and, by pulling it forcibly, sponged out the nasal cavity. The only precaution necessary is to pass the sponge as quickly as possible from the pharynx into the posterior nares, and thus, as much as possible, to avoid the pain and suffocative attacks to which manipulation at the back of the mouth gives rise.

14. *Schäffer on Polypi of the Nose*.—In the *Wiener Med. Woch.*, No. 23, 1882, Dr. Schäffer reports upon the cases of nasal polypi in which he has operated during the past eight years—120 in all. There were 100 recoveries, 17 relapses, 3 deaths; 102 were gelatinous, 8 fibroid, 7 cystic, and 3 carcinomatous.

15. *Gentilhomme on the Employment of Sulphate of Atropine in the Treatment of Coryza*.—According to Dr. Gentilhomme (*Rev. Méd. Française et Étrangère*, July 2, 1882), sulphate of atropine (from a quarter of a milligramme to one milligramme, given as a pill) has an immediate effect upon the first stages of coryza, often arresting the progress of the disease. It also produces great relief when the coryza is confirmed, but its action is less remarkable than at the beginning of the inflammation. When bronchitis exists at the same time, the sulphate produces an equally favourable effect upon the bronchial mucous membrane. The employment of sulphate of atropine is based upon the fact that it has the power of lessening the nasal mucous secretion to the extent of completely drying it up; and at the same time it acts upon the vessels by relieving their congestion.

16. *Bennett on Laryngeal Fistula, probably of Lupoid Origin*.—This case is reported in the *Dublin Jour. of Med. Science*, July 1882. The patient, a woman, suffered from a laryngeal fistula in the region of the inferior part of the cricoid cartilage, and directly below the crico-thyroid membrane. Respiratory trouble had come on a year previously, accompanied by some sanguineous expectoration on one or two occasions. Six months afterwards, a swelling was noticed on the middle part of the neck, and later a rent in the skin and a fistula communicating with the larynx appeared. The ulceration was of a lupoid character. The epiglottis was covered with red spots, the left cord deeply ulcerated and almost destroyed, and the larynx in general covered with ulcerations. The patient had then no other cutaneous lesion which could confirm the diagnosis of lupus; but afterwards erysipelas attacked the face and neck, after which the fistula closed, and the voice returned.

17. *Musser on Enchondroma of the Larynx*.—The patient, a man aged 50 (*Philadelphia Med. Times*,

May 6, 1882) had for a long time lost his voice, and could not make the least effort without provoking dyspnoea. The breathing soon became stridulous, but deglutition was normal. There was no expectoration. With the laryngoscope, congestion of the base of the epiglottis and the ary-epiglottidean folds and paralysis of the right vocal cord were discovered. Beneath the vocal cords, and upon the posterior wall, a tumour was seen obstructing almost entirely the entrance into the trachea. Tracheotomy was performed, but the patient succumbed to a resulting pneumonia. At the *post mortem* examination, the growth, of the size of a nut, was found to be an enchondroma springing from the right half of the posterior part of the cricoid cartilage. The arytenoid cartilage of this side was entirely immovable.

W. J. WALSHAM.

18. *Maurer on Extirpation of the Larynx.*—In the *Berl. Klin. Woch.*, Nos. 26 and 27, 1882, is a full report from Dr. F. Maurer of Heidelberg, of three cases, in which total extirpation of the larynx was performed by Professor Czerny. The first is a case of lympho-sarcoma of the larynx in a man aged 46, on whom the operation was performed in 1878, and who died in November 1879, after purulent degeneration of much enlarged and secondarily affected glands. The subject of the second case, who was forty-seven years of age, was affected with epithelioma of the larynx; the operation was performed in October 1880, and death occurred in the following March after relapse and profuse hæmorrhage. The third patient, who was also forty-seven, and affected with epithelioma, was treated by operation in May of last year, and up to the time of the publication of this report remained in good health. In these three cases, Dr. Maurer remarks, as in most of those of cancer of the larynx, the disease had been developed slowly, and had remained localised for a long time. In the first and third cases the disease had lasted two years, and, in the second case, five years. According to Ziemssen, sharp pains radiating from the region of the larynx to the internal ear constitute a characteristic symptom of laryngeal cancer. In the first only of Czerny's cases, that of sarcoma of the larynx, did the patient complain of such pains, which depend, it is pointed out by Dr. Maurer, rather on the situation than on the nature of the new growth. In one case of advanced laryngeal cancer, under the care of Czerny, the patient complained much of lancinating pains, but was much relieved for a time in this respect, after discharge of pus from some enlarged and suppurating glands situated on each side of the larynx. Dr. Maurer holds with Landerer that, in cases in which it is proposed to remove the larynx, preliminary tracheotomy should be performed, if possible, at least fourteen days before the main operation, and that the trachea should be opened, in this first proceeding, below the isthmus of the thyroid (inferior tracheotomy). If the preliminary tracheotomy be performed above the isthmus, the surgeon, in removing the larynx, is apt to be impeded in his manipulations by the contiguity of the cannula and of the Trendelenburg's plug. In Czerny's operations the larynx was detached from above downwards, and the trachea was not divided until the last stage. Dr. Maurer, though unaware of any disadvantage attending this method, acknowledges that, with Landerer's method of cutting from below upwards, and dividing the trachea in the first place, the tracheal opening can be at once plugged, and the subsequent stages of the operation may thus be performed with-

out any fear of the blood running into the air-passages, which are now doubly secured both by this plug, and by the Trendelenburg plug around the cannula applied at the time of the preliminary tracheotomy. To Landerer's practice of leaving the epiglottis when this is possible, Dr. Maurer objects that a possible source of relapsing disease may thus be allowed to remain. Professor Czerny, in his operations, attempted to secure every vessel before its division. The wound in each case was disinfected in the first place with a five per cent. solution of chloride of zinc, and then plugged with Lister's gauze. During the after-treatment, each patient was allowed to remain in his usual position in bed, and no endeavour was made to place the head in a lower position than the body, with the view of preventing the secretions of the wound from flowing into the air-passages. The antiseptic dressing was changed several times during the day, and neither burrowing of pus, nor aspiration of the discharge from the wound was observed in any of the three cases. In two cases the food, instead of being administered by the mouth, was passed through a soft elastic tube (a Nélaton's catheter) introduced into the œsophagus by the wound, and allowed to remain. A sufficient amount of fluid nourishment could thus be readily supplied. It is recommended that the Trendelenburg's cannula and plug inserted at the preliminary tracheotomy be kept in place until the eighth or ninth day, in order to avoid any risk of secondary hæmorrhage. The instrument should not be retained for a longer period than ten days, for fear of sloughing, which it is apt to produce. No attempt should be made to apply an artificial larynx before the end of the second week. Earlier experiments of this kind might cause secondary hæmorrhage, and after a fortnight's interval the tissues at the seat of operation have become firm, there is much less risk of hæmorrhage, and, through cicatricial retraction, the canal formed by the wound has acquired somewhat of its subsequent and persistent form.

W. JOHNSON SMITH.

OPHTHALMOLOGY.

RECENT PAPERS.

1. LITTEN.—Alterations in the Fundus Oculi in Certain Nervous Affections. (*Verhandl. der Berlin. Med. Gesellsch.*, Band xii.)
2. GALEZOWSKI.—The Treatment of Parenchymatous Xerophthalmia. (*Recueil d'Ophthal.*, April 1882.)
3. KRONDHJEIN.—On Central Tobacco Amblyopia. (*Recueil d'Ophthal.*, April 1882.)
4. BARRAQUER, J.—On the Treatment of Dacryocystitis. (*El Genio Med.-Quir.*, July 31, 1882.)
5. KÜBLI.—On Amyloid Tumours of the Conjunctiva. (*Knapp's Archives*, vol. xi, No. 2.)
6. NIEDEN.—A Case of Pulsating Exophthalmos of both Eyes. (*Knapp's Archives*, vol. xi, No. 2.)
7. ADAMÜK.—On Tumours of the Eye. (*Knapp's Archives*, vol. xi, No. 2.)
8. AYRES.—On Sympathetic Inflammation. (*Knapp's Archives*, vol. xi, No. 2.)
9. KNAPP.—Foreign Bodies Tolerated in the Eye, with Preservation of Good Sight. (*Knapp's Archives*, vol. xi, No. 2.)
10. CHISHOLM.—An Obscure Case in Nerve-Pathology accompanying Optic Neuritis. (*Knapp's Archives*, vol. xi, No. 2.)
11. NOYES, H.—Two Cases of Hemi-Achromatopsia. (*Knapp's Archives*, vol. xi, No. 2.)

1. *Litten on Alterations in the Fundus Oculi in Certain General Affections.*—Dr. Litten communicates (*Verhandl. der Berl. Med. Gesellschaft*, Band xii, p. 21) the ophthalmoscopic changes observed by him in four groups of cases. 1. *General Anæmia.*—The disc is here pale, with sharply defined edge; ultimately it may be quite white, but it wants the bluish tint of atrophy. Arteries and veins frequently show no difference in colour, the central reflex being absent. Hæmorrhages and greyish-white patches are common, and ultimately the signs of neuritis or neuro-retinitis may appear. Dr. Litten finds, in the retina of such cases examined microscopically, a general cell-infiltration, the patches frequently consisting exclusively of exuded white blood-corpuscles. 2. *General Venous Congestion.*—Here the disc is red, and the fundus, in place of the clear red of anæmia, gives a dark-red reflex. The vessels are gorged and tortuous, and, along with the hæmorrhages and white patches of anæmia, there is a greater tendency to inflammation. In two cases of chronic bronchitis and emphysema, with marked cyanosis, he describes peculiar coin-like hæmorrhages, bearing to the veins on which they principally were somewhat the relation that the Malpighian bodies have to the renal arteries. 3. *Poisoning with Nitrobenzol and Aniline.*—Dr. Litten records a carefully observed case of this. The patient lay comatose for forty-eight hours, and during this time the skin and mucous membranes had a deep violet colour. The fundus showed the same deep violet colour, the vessels being dark, almost inky in colour, with a few hæmorrhages. The violet seems due to the aniline, as nitrobenzol usually gives a blue colour. 4. *Miliary Aneurism of Brain and Retina.*—The patient here became suddenly insensible, with left hemiplegia and partial facial paralysis. The ophthalmoscope simply showed extensive hæmorrhages obscuring the field. *Post mortem* examination showed numerous aneurisms of the cerebral and retinal vessels.

JAMES ANDERSON, M.D.

2. *Galezowski on the Treatment of Parenchymatous Xerophthalmia.*—Dr. Galezowski, in an interesting article on xerophthalmia (*Recueil d'Ophthal.*, April 1882), contrasts the comparative rarity of this disease in Europe with its frequency in certain countries, such as Algeria. This fact he explains by the etiological relation existing between xerophthalmia and granular ophthalmia. He does not accept the usual classification of xerophthalmia into parenchymatous and epithelial, but proposes to substitute for this a division into primary and secondary. In the former the conjunctiva only is affected, and the cornea undergoes no change until the lids, by their retraction and pressure, have mechanically affected it. In the second the disease falls both on the conjunctiva and cornea, and at a very early stage ensures the opacification of the latter. The cause of the affection is to be found in progressive atrophy of the proper tissue of the conjunctiva, not primarily in an alteration of the secreting glands, or in a consequent failure of lubrication. As to treatment, the author believes that the only satisfactory method is that of engrafting, as has already been done in cases of symblepharon. Should opportunity offer, he proposes to remove the conjunctiva from a human eye freshly enucleated, and apply it to the affected lids. Meanwhile, he has already tried with success a graft of rabbit conjunctiva. The patient in this case was a female aged 55. Twelve years ago, she contracted granular ophthalmia. When first seen, the right eye was completely atrophied, the left the seat of a huge

leucoma, which was spread over the whole cornea, with the exception of a small portion superiorly. Entropion and trichiasis were present, and the mucous membrane of the lower lid was reduced to cicatricial tissue. The eye was completely 'dried up', although tears were still secreted. For the relief of this condition, the following operation was performed. The lid was dissected in its whole extent from the globe, and set free from its attachments. The raw surfaces were then bathed with a solution of carbolic acid, and after a short interval a rabbit's conjunctiva, freshly removed, was laid upon them. This was held in position by three sutures at the edges, and two chief ones of catgut, passing from the *cul-de-sac* through the whole thickness of the lid. Treatment consisted in the frequent application of vaseline between the lids, and of warm compresses externally. On the day after the operation, the transplanted flap had become white, and mortification seemed imminent. On the third day, however, it assumed a more healthy appearance. By the seventh day the *cul-de-sac* had become re-established with a depth of seven millimètres, and a lustrous and perfectly lubricated surface. About two months and a half after the operation, the patient could count fingers at four inches. There was no morbid secretion, and the conjunctival sac was in good condition. In his remarks on this case, Dr. Galezowski considers that Dufour's plan of transplanting a portion of buccal mucous membrane might often give good results, but he himself would prefer a portion of conjunctiva, as more resembling the natural parts. [An excellent plan of treatment in these apparently hopeless cases is to sew the lids together, having previously excised a small triangular portion of the upper and lower palpebral margins to serve as a pupil. The lids should not be opened for a year or eighteen months. When they are opened, a great improvement is often visible.—*Ref.*]

3. *Kronhjelm on Central Tobacco-Amblyopia.*—Dr. Kronhjelm records three cases of tobacco amblyopia (*Recueil d'Ophthal.*, April 1, 1882), two of them occurring in females, while in one the patient was already colour-blind for red and green. The first case was that of a sailor aged 36, who had smoked eight to ten pipes of tobacco daily, but who did not indulge in alcohol. The only treatment was abstinence from tobacco, and this within twelve days brought vision up to normal. The second case occurred in a woman aged 51, who had contracted the habit both of smoking and chewing, on account of a cough. Treatment consisted in abstinence, and in the use of electricity. In this case the amelioration was spread over a month. The third case also occurred in a woman, who had smoked three pipes of strong tobacco daily for some years. In both eyes there was a scotoma; with the right neither red nor green could be distinguished, but only blue; in the left all three colours. The author believes that these are the only two cases on record of tobacco amblyopia occurring in a female.

4. *Barraquer on the Treatment of Dacryocystitis.*—In an article on the treatment of dacryocystitis (*El Genio Med. Quir.*, July 31, 1882), Dr. Barraquer considers that the operation of removal of the lacrimal gland should be reserved exclusively for those cases in which, owing to destruction of the sac or some other cause, catheterisation has become impossible. After the removal of the gland, the eye still continues abundantly moist. He gives notes of a case in which he performed the operation with success. The patient was thirty-eight years of age, and

had suffered from obstinate epiphora from infancy, and more recently from double lacrymal fistulæ. He also suffered at the time from chronic conjunctivitis and madarosis, nor could the catheter be used in his case, as any attempt to do so at once brought on convulsions. The gland was removed under chloroform by an incision two millimètres below the external half of the brow. The gland was thus exposed, and turned out with the handle of the scalpel under spray, and the wound brought together with sutures. Three days afterwards, when the dressings were removed, the epiphora was found to have ceased. In 275 cases of dacryocystitis, the author has had to perform ablation of the sac in only three. The first occurred in a man aged 25, in whom bony obstruction of the duct rendered the passage of a catheter impracticable. The second occurred in a youth aged 16, who had had a severe attack of erysipelas, which had involved the sac and ducts. After six months of catheterisation, no improvement had taken place, and suppuration continued very profuse. In the third, removal was done for lacrymal fistula of ten years' standing. The author recommends the following method of ablation. He makes a vertical incision through the fistula into the sac, through which he introduces a good-sized plug of charpie, in order to expose every portion of the mucous membrane. An application of Canquoin's paste (chloride of zinc) is then made; and when the eschar separates, an injection of 2½ per cent. lotion of carbolic acid and water is used, the cavity being dressed from the bottom with lint soaked in salicylic acid. As regards the operation of ablation of the gland, the only inconvenience which the author ever experienced was a slight ptosis of the lid. He considers that, in cases where the conjunctiva is healthy, this ptosis is productive of little inconvenience.

5. *Kubli on Amyloid Tumours of the Conjunctiva.*

—In a very exhaustive article on the clinical significance of so-called amyloid tumours of the conjunctiva, Dr. Theodore Kubli of Dorpat (Knapp's *Archives*, vol. xi, 2) states that, in the preliminary stages of the affection, the conjunctiva is the only tissue attacked. Later on, however, other portions of the lids, or even other ocular tissues, may become involved. In 27 cases (37 eyes), the whole conjunctiva was affected in 13, the conjunctiva fornix in 1, the scleral conjunctiva in 4, the tarsal conjunctiva in 1. The prevalent locality is the upper fold and neighbouring portions of the tarsal conjunctiva. He divides the stages of development into four: 1. Simple adenoid proliferation of the subconjunctival tissue; 2. Hyaline degeneration; 3. Exquisite amyloid degeneration; 4. Calcification and ossification. If the neoplasm be poorly supplied with vessels, it is generally of a bright yellow colour, glassy and elastic; if highly vascular, it varies from reddish yellow to reddish brown. During the first phase of development, the most common symptoms are heaviness of the lids and increased sensibility of the eye to various influences. In the second, the surface of the tumour becomes smooth and glistening. The greater the vascularity of the tumour, the less its consistency. Tumours in this phase are harder than those in the first, and more elastic than those in the third. In the third, the consistency varies from hard to gelatinous, depending on the degree of vascularisation. The tissues sometimes pit on pressure. In the fourth phase, the amyloid degeneration is complicated with the presence of chalk or true bone, sometimes deeply situated in the tumour, and discoverable only by the

microscope. The disturbances caused by amyloid tumours are chiefly mechanical, and include deformity, impaired mobility always of the lids, and often of the globe, ptosis, and secondary affections of the cornea, pannus, and consecutive impairment of vision. The disease has nothing in common with trachoma, but originates in a hitherto healthy conjunctiva. The simultaneous existence of trachoma and amyloid degeneration must be looked on as accidental. Relapses sometimes occur after extirpation, and the author thinks that they are frequent in proportion to the degree in which true amyloid degeneration has taken place. The treatment, when possible, should be radical extirpation at once, but, if not, then partial extirpation at intervals, in order to prevent symblepharon. The chief point in the after-treatment is to cleanse the conjunctival sac frequently and thoroughly with a 2 per cent. solution of boracic acid, which does not irritate. [An exhaustive and valuable article on a rare affection. In addition to the cases given, the editor also refers to a well-marked case published by Drs. Prout and Bull in Knapp's *Archives*, vol. iii, p. 73. In the present paper a very full bibliography is given.—*Rep.*]

6. *Nieden on Pulsating Exophthalmos of both Eyes.*

—Dr. Nieden records a case (Knapp's *Archives*, vol. xi, 2) of pulsating exophthalmos in both eyes at the same time—a very rare affection, of which only four similar cases are on record. The patient, a female, aged 36, had, a year before she came under the author's notice, received a severe blow on the back of the head from a fall. She lost consciousness during twelve hours, vomited, and suffered from bleeding from the nose, but not from the ears. Hearing was impaired chiefly by the presence of noises in the ears, and she suffered also a good deal from vertigo and loss of smell. Some four months and a half later, the left eye was noticed to be more prominent than its fellow, while there was also a sense of continuous pressure behind it. A few days later, similar symptoms showed themselves in the right eye. Diplopia was marked, and caused great annoyance. Eight months after the original accident, the author saw her, and failed to detect any disease of the throat or heart, though appearances of exophthalmos were very marked. When both hands were applied to the globes, a rhythmical pulsation could be detected, and any attempt to press the eyes back into the orbits met with strong resistance. A *bruit* heard over the whole anterior part of the head was also present, loudest over the eyeballs. Compression of both carotids caused cessation of almost all symptoms on both sides; compression of the right had no effect. From a review of all the symptoms, the author believes the left internal carotid to have been ruptured in the cavernous sinus, and the lamina cribrosa of the ethmoid bone comminuted. The changes in the right carotid he considers as secondary to the injury in the left, and probably the result of pressure.

7. *Adamük on Tumours of the Eye.*—Dr. Adamük of Kasan gives some interesting statistics relative to the occurrence of ocular tumours in his clinic (Knapp's *Archives*, vol. xi, 2). Among 16,000 accurately registered cases, 58 tumours have been found. Five of these were exostoses from the orbital walls. There were 37 cases of various degenerations of the lids, so that there remained only 16 of primary tumour. He narrates four cases of neoplastic growths which have recently come under his notice. In one, the orbit was filled by a large melano-sarcoma, which, on removal, was found to be supra-

ocular. In the second, a sarcomatous growth was both extra-ocular and intra-ocular. In a third, an episcleral melano-sarcoma was removed, with preservation of the eyeball. In a fourth, glaucoma, with subsequent shrinkage of the globe, was found to be due to intra-ocular melanoma. In this latter case, the patient sought relief for what was diagnosed as glaucoma. The eyeball was of stony hardness; sight was abolished, the pupil dilated, the anterior chamber shallow, and the lens cataractous. No operation was undertaken, and when seen five months later, the eyeball had shrunk to the size of a bean. On removal, the whole space within the globe was found to be filled with a black mass, which appeared to consist only of pigment. On microscopic examination, it turned out to be melanotic carcinoma. What caused the shrinkage is not very evident; possibly, the author suggests, an insufficient blood-supply by stoppage of the vessels, or by their rupture in consequence of the pressure of the sclerotic. The optic nerve was not affected, and after removal no return of the tumour occurred.

8. *Ayres on Sympathetic Inflammation.*—Dr. Ayres records three cases bearing on the subject of sympathetic inflammation (Knapp's *Archives*, vol. xi, No. 2). In the first, the patient had suffered from panophthalmitis, for which the stump had been enucleated. One year afterwards symptoms of sympathetic inflammation appeared, together with great pain in the stump of the excised nerve, which pain was considerably relieved by pressure. The end of the nerve was cut off, with the result of causing an immediate improvement in all the symptoms, and the restoration of perfect vision. The author remarks that this case is a good instance of sympathetic inflammation, arising from the incarceration of the optic and ciliary nerves in the wound made by the ordinary operation of enucleation. The author's second case occurred from the impaction of a fragment of glass in the left eye. Six months afterwards, the right eye became affected, and presented a typical picture of sympathetic iridocyclitis. Linseed poultices were applied for five days, and then the patient returned home, and continued the same treatment for 105 days. He could count fingers at 15'. The left eye at this time was enucleated. About seven months later, vision had risen in the right eye to Snellen No. 1. The media were clear, and the funds oculi normal. This case is interesting, both as showing the value of poulticing as a therapeutic measure, and also because the fact of neuritis being present was established by the ophthalmoscope. Plastic iritis and neuritis were associated here, as they probably are in many more cases than is supposed. The third case was one of rupture of the sclerotic in a man aged 50, followed by sympathetic iridocyclitis, with vision reduced eventually to counting fingers at eighteen inches. This condition had been reached thirty-six days after the receipt of the original injury. Poulticing was continued for three weeks. When examined by the ophthalmoscope, the optic disc was œdematous, and the retinal vessels were blurred and arched forward by exudation. A month later, these symptoms had almost disappeared. Progress continued steadily in both eyes. In the left (originally ruptured), the disc could be seen, and fingers counted with + specific gravity D at 14 feet. The author considers that, as regards sympathetic inflammation, at least two facts can now be considered as certain. One is, that enucleation of the injured eye does not arrest or shorten the course of the disease; the other is, that an iridectomy should not be made until all symptoms of

inflammation have disappeared. He also calls attention to the great value of poulticing as a means of treatment.

9. *Knapp on Toleration of Foreign Bodies in the Eye.*—Dr. Knapp of New York (*Archives*, vol. xi, No. 2) records two interesting cases of foreign bodies tolerated in the eye without serious damage to sight. The first occurred in a man aged 29, who, when hammering a piece of steel, was struck with a fragment, which passed through the cornea, iris, lens, and vitreous body, and finally remained in the retina, one end being free in the vitreous body; vision=20-20, but there was a circumscribed scotoma. The eye was observed for ten weeks, during which time it was free from irritation. The visible lesions were a corneal scar, a scar on the iris, and a greyish streak in the track of the wound through the lens. The vitreous humour was somewhat diffusely opaque, but free from all cords and flakes. The body could be seen plainly with the ophthalmoscope, and was firmly imbedded. The second case occurred in a man aged 21, in whose cornea a fragment of steel had been imbedded, without serious consequences, for over two years, and was successfully removed. As to treatment, Dr. Knapp, in all recent cases, endeavours to remove the foreign bodies by curved hook, forceps, or magnet. If, however, the foreign body be invisible, he places the patient in bed, uses atropine, and bandages both eyes with a flannel roller, thus securing the best conditions for the foreign body to sink on to the retina in case it be floating in the vitreous humour, or to fasten itself into the retina if once it have reached that membrane. A very full bibliography of all known cases (and one unpublished one) is given by the author. There are in all twelve cases on record in which foreign bodies have pierced the walls of the eye, and remained imbedded in the retina without producing material injury. An analysis of these cases is given, with special reference to the size, material, position, lesions produced, and results. As regards the diagnosis, the author calls attention to the value of a symptom sometimes met with, viz., a bright spark, which during examination with transmitted light, seems to flit across the red field. This does not prove that the foreign body is in the vitreous humour, but it may help to determine its position very materially. The prognosis will depend on the size and nature of the foreign body, and the location and extent of the lesions. Tolerance, even if once established, may be limited, and after years the foreign body may become free, and cause destruction of the eye. A case is recorded, in which a foreign body caused three several attacks of iridocyclitis within ten years, with two intervals of rest, one of three the other of four years' duration.

10. *Chisholm on an Obscure Case Accompanying Optic Neuritis.*—Dr. Chisholm of Baltimore records a remarkable case of obscure nerve-pathology, accompanied by optic neuritis, which occurred in a hitherto healthy man, aged 28 (Knapp's *Archives*, vol. xi, No. 2). The earliest symptom complained of was pain in the movements of the left eyeball, with slight clouding of vision, which proceeded with such rapidity as to destroy sight within twenty-four hours. Similar pains then made their appearance in the right eye, with subsequent blindness in it also. By the morning of the third day, not even the appreciation of light was left to the patient, who otherwise felt perfectly well. A new train of symptoms now commenced from the other extremity of the body, viz., interference with locomotion, with loss of sensation in the feet. A paraplegia developed itself, advancing

steadily and rapidly up the spinal cord, and affecting progressively the feet, legs, thighs, pelvis, abdomen, and thorax. This destroyed life in twelve days from the commencement of the eye-symptoms, the brain remaining clear to within a few hours of death. Ophthalmoscopic examination showed choked discs, with very woolly outlines, but no other intra-ocular disturbances. No necropsy was permitted. The author asks for an explanation of the appearance of the ocular symptoms with absence of cerebral symptoms, fully three days before there was any disturbance in the lower extremities or bladder. Rapid effusion within the spinal sheath might account for the latter, but will not for the former.

11. *Noyes on Hemi-achromatopsia*.—Dr. Noyes of New York records two interesting cases of acquired colour-blindness (Knapp's *Archives*, vol. xi, No. 2). The first occurred in a medical practitioner, aged 42, of an intensely 'nervous' diathesis. The defect of sight occurred simultaneously with general depreciation of health, vision = O. D. 20-100; in viewing along black line upon a white ground, the patient observed transverse breaks in it of white spaces, which always preserved the same relative position to each other; vision = O. S. 20-20. With the ophthalmoscope each optic nerve showed large physiological cuppings. The tissue of the nerves was whitish, that is, indicated atrophy. The visual fields were normal in extent, but in O. D. the perception of colours was limited to the recognition of blue over a small surface [indicated by a chart]. For a circular space at the centre there was absolute colour scotoma, while beyond the border of the zone no colour could be seen. In the space between 210° and 240° , and about the latitude of 40° , he sometimes seemed to discern red, but this would be confounded with green. But it was in a very limited region that even this sensation could be excited. In the left eye the visual field had a peripheral limitation on the outer and upper side. The perception of colour was absolutely wanting in the outer (temporal) half of the field, and the line of demarcation ran vertically through the macula lutea. On the nasal half the zones of green, red, and blue had about their usual extent and relations. The so-called Argyll Robertson pupils were distinctly marked. The above symptoms have somewhat improved under treatment; the author is inclined to consider them remotely due to lesion of the spinal cord. The second case occurred in a gentleman aged 60. The general symptoms and ophthalmoscopic appearances pointed either to glaucoma simplex or nerve-atrophy. There were, or had been, no head-symptoms nor indications of disease of the spinal cord, except absence of the patellar reflex. The visual fields were as follows: O. D., no limitation in perception of light. In colour-sense the nasal side was absent, the line of division being vertical through the macula lutea. The temporal side was sensitive to colour; green, red, and blue were perceived over about an equal area, viz., to about 50° O. S. There was no peripheral limitation of the field, but an absolute central scotoma of precisely 10° diameter; colour-perception was wanting on the nasal side, and the line of division was on the vertical meridian. On the temporal side colour was recognised to 40° , and over about equal areas for green, red, and blue. The case was, therefore, one of bilateral nasal hemi-achromatopsia. The author remarks that, in the first case, it may be assumed that there was impairment either in the perception of colour, or in the conductivity of the perception, according to the struc-

tures to which we impute the faculty of recognising colour—whether in the retina or in the nerve-fibres. As regards case 2, the author has great difficulty in locating the lesion, especially on account of its perfect symmetry. This fact, taken singly, would seem to indicate the chiasma or a portion of each tract optic as its seat—an explanation not, however, free from difficulties. LITTON FORBES.

TOXICOLOGY AND FORENSIC MEDICINE.

RECENT PAPERS.

1. HUBBARD.—Arsenic: its Physiological Action, Elimination, and Detection. (*The Physician and Surgeon*, vol. iv, p. 348.)
2. CROOKES.—Lead-Poisoning by means of Water-Supply. (*Chem. News*, 1882, Aug. 25, p. 88.)
3. PONFICK.—On the Dangers attending the Use of the Edible Morel. (*Virchow's Archiv*, Band lxxxviii, Heft iii, sec. 445; *Med.-Chir. Runds.*, 1882, p. 619.)
4. SHAW.—Poisoning by Daphne Mezereum. (*Brit. Med. Jour.*, 1882, vol. ii, p. 521.)
5. Medical Examiners versus Coroners. (*Trans. of the Massachusetts Medico-Legal Soc.*, vol. i, p. 220.)
6. Survivorship.—(*Jour. de Méd. de Paris*, tome ii, pp. 98, 121.)

1. *Hubbard on Arsenic*.—T. H. Hubbard has investigated the physiological action of arsenic, its elimination by the kidneys, and its detection and estimation (*The Physician and Surgeon*, vol. iv, p. 348). As regards its physiological action, he finds that it causes a notable increase of the chlorides excreted in the urine, but has no appreciable influence on the excretion of phosphates; that the uric acid is unaffected, whilst the increase in the amount of urea excreted daily (6 grains) admitted, perhaps, only of the negative deduction that the waste of tissue was not increased. When arsenic was taken in divided moderate medicinal doses (0.06 to 0.12 grain daily) the medicine made its appearance in the urine of a healthy person in about four days, and its rate of elimination was irregular. The maximum amount found in the urine was 0.01 grain on the fourth day after doses of 0.06 grain per day had been taken. When arsenic was given to a person in feeble health, and troubled with indigestion due to gastric catarrh, the metal could not be detected in the urine; and it was inferred that, on account of weak digestion, the arsenic pills passed through the digestive tract undissolved, or that, having been dissolved, and the arsenic passed into the system, it was either there retained or excreted in other ways than by the urinary tract.

2. *Crookes on Lead-Poisoning by Water-Supply*.—An action for injury resulting from the use of a public water-supply has recently been decided at the Yorkshire Summer Assizes (*Chem. News*, Aug. 25, 1882, p. 88). The case is instructive to all interested in the supply of water to towns. The facts and features of the case were these. Mr. Milnes, living in the outskirts of Huddersfield, was attacked, about a year ago, first with violent colic, and ultimately with wrist-drop, and other symptoms of lead-poisoning. He lost almost entirely the use of his arms, his brain was affected, and at one time his life seemed in peril. He subsequently, under treatment, partially recovered the use of his limbs, but was, after a year still unable to dress himself. The fact that he was suffering from lead-poisoning being beyond all dispute, the question

arose as to how the noxious metal was introduced into the system. It appears that the town water-supply is derived from several reservoirs, Mr. Milnes' house being served from the 'Blackmoorfoot' reservoir. All the various water-sources are remarkably free both from organic and mineral impurities, and are consequently exceedingly soft; that from the 'Blackmoorfoot' dam being, perhaps, the purest. Unfortunately, in virtue of that very purity, it is, though perfectly wholesome in the reservoirs, channels, and mains, capable of acting upon lead service-pipes. Concerning the immediate cause and *modus operandi* of this action, differences of opinion prevail. In samples of water drawn from Mr. Milnes' house, 0.34 grain of lead per gallon was found by one analyst, 0.4 grain by another, and a third chemist found 0.77 and 0.84 grain respectively in two samples. On the other hand, a fourth analyst found in a sample of water from the kitchen only 0.01 grain; and in that from the wash-house, 0.04 grain. These discrepancies are quite intelligible, when the varying periods of time which the water may have been in contact with the leaden service-pipes is taken into consideration. The important point was—Does the water of the 'Blackmoorfoot' reservoir dissolve lead more rapidly than soft waters generally, and if so, why? It is stated that the Blackmoorfoot water very closely resembles that supplied by the Manchester Corporation. Indeed, the waters of Halifax, Bradford, Leeds, Batley, Sheffield, and Manchester, as well as that from most of the Huddersfield reservoirs, if allowed to lodge in a lead pipe for twelve hours, all took up appreciable quantities of the metal; and it is even reported that the Manchester water has been found to contain 0.3 grain of lead per gallon. Hence, apparently, the Blackmoorfoot water does not form any marked exception to other soft mountain waters. In reply to the question, if lead be so generally present, or liable to be present, in such waters, why is lead-colic not more common? it may be said that lead is very capricious in its action, and that an individual's power of resisting lead is very variable, and stands in no apparent relation to his health and vigour. As regards the solvent action of the water in question, it was admitted to have an acid reaction; and this was perhaps due to presence of sulphuric acid. The dam receives certain ferruginous springs, and the iron salts thus introduced, on being diffused in the water and exposed to air, become split up into a basic salt, which is deposited, and free acid, or, rather, perhaps, an acid salt, which remains in solution. Odling, Crookes, and Tidy were of opinion that sulphuric acid, if present in small quantities, must tend to protect the pipes from the action of the water, a layer of the insoluble, or, at least, very sparingly soluble, lead sulphate being formed. Allen took a different view, and thought that sulphuric acid would produce corrosion. As a remedy, the borough analyst advised lime-water; but it was pointed out, that if this were added in excess, the mischief might be increased. An opinion was also expressed, in explanation of the frequent action of soft pure waters upon boiler-plates, that the agency of corrosion is the oxygen held in solution in the water. If this be the case, the prevention of corrosion will be very difficult, since a thorough de-aeration of the water, even if practicable, would cause it to be disliked by many persons as flat and insipid.

3. *Ponfick on Fungi*.—E. Ponfick has investigated the poisonous nature of the edible morel, *Helvella Esculenta* (Virchow's *Archiv*, Band lxxxviii, Heft 3, s. 445; *Med.-Chir. Rund.*, 1882, s. 619). He finds that

the morel contains a poisonous principle, which can only be removed by prolonged boiling and expression. He draws up some practical rules as to cooking the fungus, the gist of which is that it must be repeatedly boiled in water and pressed thoroughly, the waters used in the decoctions being rejected.

4. *Shaw on Poisoning by Daphne Mezereon*.—Shaw relates (*Brit. Med. Jour.*, 1882, vol. ii, p. 521) a case of poisoning by the red berries of *Daphne Mezereon*. A child, aged 2½ years, ate a number of the berries, probably fifty. She vomited a little within half an hour. An emetic was then administered, but none of the seeds were rejected. Shortly afterwards she became pale and unconscious, and had a violent rigor. She lay still, with the eyes wide open, the pupils fixed and dilated, and the face blue. The pulse was almost imperceptible, and the breathing was very faint and slow. The lips appeared as if they had been burnt, and the inside of the mouth was swollen. Under the influence of stimulants and stimulating external applications, in two hours the bowels acted violently, and a large number of the seeds were passed. The child continued drowsy, but soon made a complete recovery.

5. *Medical Examiners v. Coroners*.—The Report of the Executive Board on the Work of Medical Examiners in the State of Massachusetts, for the year 1880, is an instructive document (*Transactions of the Massach. Medico-Legal Soc.*, vol. i, p. 201). In that State coroners have been substituted by medical examiners, who examine the bodies of all persons suspected to have died from violence; and an inquest is held only in those cases where this is absolutely necessary. During the year 1880, the total number of views was 935; necropsies, 229; inquests held, 197. The cost to the State, as compared with the old system, is reduced by more than 20 per cent.

6. *Survivorship*.—An extraordinary case, involving a question of survivorship, and the devolution of a large property, has, after much forensic discussion, been compromised at Marseilles, where the incidents of the case occurred (*Jour. de Méd. de Paris*, tome ii, pp. 91, 121.) A man, named Rivoire and his wife, with other persons, were landing in a boat, when a wave from a passing steamer swamped the boat, and the parties were precipitated into the water. One of the party, named Maniette, seized the woman Rivoire—who had laid hold of him by the hair—and swam with her towards the river-bank. Before the two reached the bank of the Rhone, the man Rivoire, in his alarm, seized Maniette by the neck; whereupon the husband and wife—the latter of whom appeared to Maniette to be unconscious—disappeared beneath the water. The body of the man Rivoire was not recovered, but that of his wife was found *in situ* next day. The corpse was pallid, and the countenance unaltered and normal. M. De Beauvais' conclusions, after an examination of the facts and circumstances of the case, were that, as there was evidence that the wife was in a state of syncope at the time of her final immersion, and her husband was uttering cries when he also disappeared at the same moment, the man must have died speedily from asphyxia, and that his wife would most probably survive for a longer period. The state of the wife's body lent confirmation to this supposition; and, finally, it was impossible to prove that the husband was the survivor. The sex of the woman, it was supposed, would favour death from syncope, and hence a longer survivorship than in the case of the man. M. De Beauvais seems to entertain no doubt

whatever that the woman must have been of necessity the survivor. M. Brouardel, however, with greater caution, declined, in the absence of an necropsy on both bodies, to pronounce an opinion as to which of the two—the man or the woman—was the survivor.

THOS. STEVENSON, M.D.

REVIEWS.

Memoires de Chirurgie. Tome troisième. Etats Constitutionnels et Traumatisme. Par le Dr. A. VERNEUIL. Paris: G. Masson. 1883.

Surgical Memoirs. Third volume. Constitutional States and Traumatism. By Dr. A. VERNEUIL. Paris: G. Masson. 1882.

THIS volume, forming the third of a series of surgical memoirs in course of publication by Professor Verneuil, is devoted to the consideration of the relative modifications induced in various constitutional maladies, or, as M. Verneuil prefers to call them, 'Panpathies', by injuries, and the modifying effect of these constitutional conditions on the course of the wounds themselves. It consists, as the two former ones have, of a collection of papers which have been published by M. Verneuil or his pupils since he first took a special interest in the subject, and, as such, forms a historical record of the growth of his views and knowledge of the subject.

The book does not, as its title would lead one to expect, treat fully all the diatheses or constitutional states, but is in main part devoted to the consideration of the alcoholic and malarial, shorter sections treating of the rheumatic, malarial-diabetic, of 'traumatic neuralgia', and of acute traumatic inflammation of the spleen; while in the earlier papers of M. Verneuil, and in a paper of M. P. Clipet, a short mention is made of the effects of the diatheses usually so called. In spite of the very large section allotted to the question of the relation of alcoholism and injuries, the reader finds very little new light thrown upon the subject. M. Verneuil regards an alcoholic as a patient in whom a morbid condition of the principal viscera exists in a more or less advanced stage, combined with a vitiated state of the blood; the condition of the organs being usually one of fatty degeneration or sclerosis. As to any actual lesion of the nervous system to be discovered *post mortem*, he speaks with reserve; but in a foot-note he quotes an oral communication of M. Lancereaux to the effect that, in patients dying from an attack of alcoholic delirium, although recent lesions (even congestion) are not always to be discovered in the brain, yet old lesions, consisting of a granulo-fatty (*granulo-graisseuse*) condition of the cerebral capillaries, and sometimes of the adjacent nerve-cells, are invariably present, as in the case of old men. With regard to the general pathology of *delirium tremens*, M. Verneuil speaks at length in the report of some meetings of the Académie de Médecine. He considers that the condition may have a double origin, being dependent either on nervous irritation starting from the injured spot and conveyed thence to the central organs which he describes as 'a reflex delirium', or on an altered state of the blood, the cerebral disturbance being then due either to anæmia or to septicæmia. With such extended views as to the origin of *delirium tremens*, it would have been interesting to learn from M. Verneuil whether he

is able to draw any diagnostic line between it and the state known as *delirium traumaticum*, originally described by Mr. Travers as prostration with excitement, which is certainly to be met with independently of alcoholism. Both M. Verneuil and M. Ch. Pèronn allow the existence of this state; and although the latter, in his essay, makes some remarks on the distinctive diagnosis of alcoholic delirium, in the course of which he essays to prove its identity with the 'délire nerveux' of Dupuytren, no mention is made of the nature or peculiarities of traumatic delirium.

Some space is devoted to the consideration of the class of surgical cases in which sudden death occurs, for which the *post mortem* examination offers no sufficient explanation; and, in the course of his remarks on this subject, M. Verneuil adverts to the question of fatty embolism, between which and alcoholism he thinks a relation will be one day demonstrated. He regards fatty embolism as an anatomical fact, incontestably proved, but is unwilling to accept an exclusive origin for the phenomenon, 'based upon a clinical romance bearing the imprint of exalted imagination.' He thinks the presence of a fracture unnecessary for the escape of the fat-globules into the general circulation, such globules being set free, in large quantity, from adipose tissue generally, in cases of severe traumatic inflammation, accompanied by acute septicæmia; this latter being, in his opinion, their real source of origin. He remarks on the frequency of such inflammation in alcoholic patients in whom fatty embolism is also met with, and asserts that the patients really die from the septicæmia. He asks whether, if the mechanical theory of fatty embolism were true, cases would not be met with in the country, why it should attack some patients rather than others, why antiseptic treatment should affect its occurrence, and why it should be rare in children. In support of his theory, however, he offers only one case, and in that the condition was not discovered.

The importance of diagnosing chronic alcoholism in cases where an operation is contemplated, is dwelt upon, and the previous preparation of the patient by appropriate treatment, as has been recommended by Mr. Savory, is urged; while, with regard to the prognosis, the rule is laid down that, in cases of chronic alcoholism, all other things being equal, the prognosis of traumatic lesions is of exceptional gravity.

As to treatment, the administration of opium, and a proper amount of alcoholic stimulant, is insisted on as prophylactic, the usual treatment by narcotics being relied upon for dealing with *delirium tremens*. M. Verneuil, however, expresses unqualified dissent from those who treat *delirium tremens* by entirely cutting off alcoholic stimulants.

In connection with the subject of alcoholism are two short sections—one on the bronze discoloration of the skin, sometimes met with around wounds, and usually regarded as one of the signs of general blood-poisoning, which is described under the title of 'Phlegmon bronzé'; and another on the presence of pus of an orange colour. This latter, which we find mentioned in some English works, had been described by M. Delore as occurring only in fatal cases, and hence as a dangerous prognostic sign. M. Verneuil gives a number of cases in which recovery took place, and ascribes the colour to the presence of broken up blood-colouring matter. He states, on the authority of M. Broca, that it is not the result of the action of micro-organisms, as has been shown to be the case with the blue pus.

Next in extent to the section on alcoholism, is that devoted to the consideration of the relative effects of malaria and injuries on each other. This includes several papers extending the knowledge on this subject, which we owe to Sir James Paget and others. A large number of cases are given illustrative of the occurrence of intermittent fever, periodical hæmorrhages, and neuralgia in patients who had been exposed to malarial influences, while it is attempted to show that in such patients wounds heal less readily, are especially liable to phagedæna and hospital gangrene, that fractures heal less readily, and even that they are especially liable to tetanus.

That in malarial districts, and while the malarious influence is still strong, the healing of wounds may be interfered with, is no doubt true; in fact, Professor Mazzoni is quoted to the effect that, in the Roman states, malarial infection often so impoverishes the blood as to render patients deficient in strength to undergo major operations; but it would seem that in minor degrees, as in the intercurrent attacks, often seen among the surgical patients at the Seamen's Hospital at Greenwich, the fever is so readily controlled by quinine that the attacks are not, as a rule, held of great moment.

In connection with the subject of malaria, a thesis on acute traumatic inflammation of the spleen, by M. Mathon, has been inserted. The author essays to prove that, although usually considered of great rarity, this disease is of not very unfrequent occurrence, and, in support of his assertion, he gives twenty-seven cases. In all, the disorder followed an injury to the side, and was indicated by pain and tenderness in the splenic region, the pain extending down the left leg, and to the shoulder, and increased by respiratory movements, together with intermittent fever, and increase in splenic volume. None of M. Mathon's cases, however, were fatal, and hence the diagnosis can scarcely be looked upon as settled. They were rapidly cured by the administration of quinine in conjunction with the ordinary treatment adopted in cases of abdominal injury.

M. Verneuil also contributes an essay on a form of neuralgia affecting wounds after the cessation of the first pain due to the injury, but occurring previously to cicatrization. For this affection he proposes the name '*Névralgie traumatique secondaire précoce*'. The pain occurs in the absence of any local condition of the wound to explain it, and has special characters, the most important of which are its periodicity and the power of quinine to cure it. Its characters, etiology, diagnosis, and prognosis, are very minutely described, and the description is supplemented by numerous illustrative cases.

The work concludes with some remarks on the connection and co-existence of malaria and diabetes, also with numerous illustrative cases.

In the preface, Professor Verneuil makes a somewhat vigorous attack on modern operative surgery, the advance of which he considers has been allowed to outstrip that of therapeutics.

The book contains a very large amount of information and practical experience. G. H. MAKINS.

experience upon the subject of chronic bronchitis, is sure to be worth reading. Few diseases require more management; few repay it better. The author of the present volume appears to us to fulfil our requisitions, and, withal, he has composed a very readable book. There are but five chapters, a chatty introduction, followed by the objective and subjective phenomena, the pathological relations, the forms of the disease, and the treatment. Moreover, the chapters are by no means long, and the print is large. Thus there is no excuse for anything short of complete perusal, and whoever undertakes this not difficult task will assuredly derive from it much information. In the chapter on the pathological relations of chronic bronchitis, a subject is touched upon which we should have been glad to see handled a little more fully, as it is by no means unimportant, within the author's limits of a '*practical treatise*'—we allude to the subject of foetid bronchitis. Dr. Fothergill appears to endorse the general view that it is an occasional symptom of bronchiectasis, the mucus and pus decomposing in the dilated tubes. We are far from satisfied that this is correct. On the contrary, our experience would lead us to quite another conclusion, that, when foetid expectoration is superadded to bronchiectasis, it is more probable than not that some disintegration of the pulmonary tissue is in progress. In other words, it is diagnostic of ulceration of the bronchial tubes and of local gangrene of the adjacent textures.

The chapter on treatment contains much that is instructive to those for whom the book is intended, practitioners just commencing practice. It contains a judicious summary of the remedies most usually approved for the various forms of chronic bronchitis, and impressive cautions concerning the avoidance of narcotics. The advocacy of strychnia as a stimulant of the respiratory centre is well worth attentive study; and amongst other advice we may single out this as an aphorism which is not sufficiently remembered—that severe disease and suffering demand and justify heroic measures. It must have happened to all of us to see persons in a desperate condition, the disease, the while, being just tickled, if we may express it so, with the appropriate remedy, when, for the required relief, large doses were necessary. Powerful remedies are given at a risk, no doubt; but there should be no cowardice in facing it. Drugs are, perhaps, most of service in dangerous states; and the judgment of the physician is worthless if he allow a case to go on for fear of the ultimate result, and thereby cut off, perhaps, a last chance. The author would appear to have the courage of his opinions, for we read: '*I should push strychnia till the limbs twitched, going up to one-tenth of a grain every five or six hours; or further, if necessary.*' Perhaps it would be safer to accept his principle without committing ourselves to his details. His illustration is an extreme one, and it could be but seldom that we should nail so completely to the mast as this. We cannot close this notice without pointing out that the book has two faults. First, it contains far too much of the *ego*. This is not objectionable, when it is the embodiment of experience which is new and peculiar; but it borders upon the ridiculous, and we say this in all good nature, when the author's experience teaches no more than has been the rule for ages. This is so notably with regard to the administration of opium in bronchitis, of belladonna and atropia for profuse sweating. Our other complaint is in the matter of illustrations. 'The addition of numerous illustrations of

Chronic Bronchitis. By J. MILNER FOTHERGILL, M.D. London: Baillière, Tindall, and Cox. 1882.

Aids to Diagnosis. Part III. By J. MILNER FOTHERGILL, M.D. London: Baillière, Tindall, and Cox.

ANYONE who writes from his heart—to take a popular expression—that is to say, writes from a large

diagrammatic character to illumine the text is felt desirable, as the lessons of pathology throw much light of a practical character, upon the diseases of the air-passages.' So we read in the preface. But these diagrams are made to do duty over and over again, and are diagrammatic to such an extent, that if they are helpful to the pathological questions involved, we are yet in the primitive ages of pathology.

"Aid to Diagnosis" is one of the most amusing little pamphlets we have seen. A puzzle solved loses most of its interest; diseases diagnosed in some sort do the same, but the puzzle-solver in this case manages to keep up our interest in the questions he essays, not unsuccessfully, to elucidate, and as we finish his work, we involuntarily remark, 'What a cheap shilling's worth; a book fit for a railway bookstall'. To be sure, it does not strike us as being likely to be of any great use for those to whom it is addressed; but very few of these books are. Its chief utility will be, we suspect, in telling, in an amusing sort of way, a number of well-known but often forgotten facts: an inculcator, by way of shame, of common sense. It is certainly not flattering to the students of medicine that such a book should be necessary—it contains nothing that the commodity entitled common sense would not teach without the reading; but, granting that such works are required, we can certainly say it would be a happy thing if they could always be written in the style which Dr. Milner Fothergill has made peculiarly his own.

J. F. GOODHART, M.D.

A Treatise on the Diagnosis and Treatment of Diseases of the Chest. By WILLIAM STOKES, M.D., D.C.L., F.R.S., etc. With Memoir by Dr. Acland. Edited for the New Sydenham Society by Alfred Hudson, M.D., M.R.I.A. London: New Sydenham Society. 1882.

It may be a question how far the New Sydenham Society should extend its functions to the republications of the works of deceased British authors, but there can be no doubt it is well advised in placing the volume before us within reach of its subscribers. It has been long out of print; but the late Dr. Stokes' work on *Diseases of the Chest* is so well known that it needs no review. Happily, in the editor's hands it remains the same as it ever was. It is a classic jewel, like Watson and others, sparkling everywhere; it would ill-bear retouching. It is, as Dr. Acland fitly says in his introduction, an historical landmark in medicine, and as such will always have a worthy mission, though increasing knowledge may seem to put it out of date. Dr. Hudson, the editor, has also been removed by death—has died while erecting a monument to his friend. But it is a satisfaction to feel that the monument has been left in loving hands, and loses none of its excellence by the graceful memoir by which it is prefixed. We might, indeed, complain that we are so fascinated at the threshold, by the account of Dr. Stokes as a man, that we have a less keen sense of what than we should otherwise have, and than our education needs, of Dr. Stokes the Physician. To gain some idea, however, of a mind which appears to have been singularly rich in observation and in fancy, one must not stop short of the last page, and it may be doubted whether, among the many lessons which it would impart, any more requires to be taken to heart at the present

day than this, alluded to by Dr. Acland: 'If you would advance knowledge, be content to take up the thread where the last investigator laid it down, and set yourself to carry on his work.' Were we all to follow this advice, there would assuredly be more work and less writing than is the lot of those who live to-day.

On the Morbid Conditions of the Urine Dependent upon Derangements of Digestion. By CHARLES H. RALFE, M.D. London: J. and A. Churchill. 1882.

THIS is an admirable little book; to our mind, the type of what such a book ought to be. It gives abundant evidence of original observation, experiment, and reasoning. The points discussed are: (1) The formation and removal of acid from the body; (2) acid dyspepsia; (3) flatulent or alkaline dyspepsia; (4) uric acid derangements; (5) oxaluria; (6) derangement associated with excessive elimination of phosphoric acid. Dyspepsia is an intricate subject, and one not very satisfactory either to talk or write of; but, few bring the forms of which he treats more within the grasp of reality than Dr. Ralfe. We have always considered that his observations with regard to the behaviour of bicarbonate of potash, according as it is administered during digestion or not, to be of great practical importance in many ways. These are still the most solid additions to our knowledge that the book contains; but we should do the author but scant justice did we not repeat that his work, at all points, is up to the brim with information.

St. Thomas's Hospital Reports. New Series. Edited by Dr. ROBERT CORY and Mr. FRANCIS MASON. Vol. XI. London: J. and A. Churchill. 1882.

THE larger part of the present volume is devoted to a medical and surgical report of the cases admitted during the years 1880-81, and to the calendar and prospectus of the Medical School for next session. The original articles are nineteen in number, and most of them deal with subjects medical. Several of them touch the fringe of very interesting questions, among which may be mentioned Dr. Ord's paper on some cases of 'Paroxysmal Pyrexia Simulating Ague', Dr. Harley's on 'Fæcal Retention especially as it affects the cæcum.' Dr. Bristowe has a short paper on 'Hydatid Tumours of the Abdomen', and there are other useful articles by Mr. Nettleship, Drs. Stone and Lilner, Dr. Edmunds, Dr. Seymour Taylor, &c.

JAMES F. GOODHART, M.D.

Clinical Surgery, Extracts from the Reports of Surgical Practice between the years 1860-1876. By Dr. THEODORE BILLROTH. Translated from the original, and edited, with annotations, by C. T. DENT, F.R.C.S. London: The New Sydenham Society. 1881.

THIS book forms a companion volume to Professor Billroth's well-known *Surgical Pathology*, a translation of which has been already issued by the New Sydenham Society. It purports to be a complete clinical record of the author's surgical practice during a period of sixteen years, accompanied by

observations on many subjects, regarding which his experience enables him to speak with especial weight. As such, it is difficult to over-estimate its importance and worth, as offering to the profession a candid exposition of the experience of a great surgeon, in which the chronicles of success and failure find an equal place.

The report deals with every variety of surgical case, excepting those belonging to the departments of ophthalmology and obstetric medicine; and, although somewhat meagre with regard to cases of surgical injury (from causes adverted to both by author and editor), it is singularly rich in cases of surgical disease. It would be impracticable to give here a detailed notice of all the subjects treated of in the book, but the following sections may be enumerated as of special interest, viz., the section on neuralgia of the fifth nerve and its treatment, plastic surgery of the face, removal of the tongue, operations on the air-passages, the treatment of enlarged cervical glands, the extirpation of bronchocele, the treatment of vertebral caries, diseases of the breast, extroversion of the bladder, litholapaxy, cystitis, ovariectomy (with remarks on 140 cases), gangrene, osteomyelitis, diseases of joints, and the chapters on statistics of amputations and tumours.

The present translation, appearing nearly four years after the publication of the last volume of reports by the author, must not be taken as representing his present views on all subjects, the constantly progressive nature of which, with regard to surgical treatment, will be readily appreciated by everyone who reads the highly instructive and interesting remarks accompanying the cases of ovariectomy; in which case, however, as in one or two others, the editor has brought up the report by information from private sources to the year 1881. For the same reason, we miss any important remarks regarding some of the most recent developments of operative surgery, such as nephrectomy, nerve-stretching, etc., while no mention is made of the treatment of wounds by iodoform, to which so extensive a trial has lately been accorded in the Vienna clinic. We are, however, highly indebted to the editor for an abstract of the pamphlet by Dr. Wölfler, on the recent operations on the stomach performed either by Professor Billroth, or under his direction.

A chapter is devoted to the subject of treatment of wounds, which expresses the author's views, at any rate up to the year 1878, while the editor has been enabled to give us the method of dressing employed in 1881, which consists of a modified carbolic acid dressing without the use of the spray. Although firm advocates of the antiseptic treatment must be disappointed by the moderate enthusiasm for the system here expressed, we cannot but expect to see in a further volume of reports a large diminution in the percentage of deaths chronicled as occurring from pyæmia and septicæmia. The opinions held by the author on this question readily explain the want of favour which many operations with which the reports of some German clinics abound, find with him. Thus we find him disinclined towards early excision of the hip, to opening chronic vertebral abscesses, to suturing the patella, while no mention is made of the modern operation for hydatid of the liver.

The editor is to be congratulated on the highly satisfactory manner in which he has accomplished the difficult and laborious task of selecting and re-arranging the materials for the volume, with a view to render them more generally useful. The transla-

tion is pleasant to read, and throughout very correct, although, perhaps, exception might be taken to the rendering of some names; thus, although a precedent has been set in this matter by the translator of Niemeyer's *Medicine*, it would seem better for English readers to use the words typhoid, or typhus abdominalis, rather than 'typhus'; and, again, 'lobular metastatic pneumonia' seems rather to refer to a part of a general septic disorder than to a local inflammatory process, due to the passage of putrid discharge into the air-passages (*fremdkörper Pneumonie*).

The text is enriched with many useful editorial foot-notes, referring to cases mentioned, and especially to Hackley's translation of Professor Billroth's *Surgical Pathology*. The volume is concluded with a selection from the plates accompanying the original reports. It seems a pity that the explanatory text, published with the illustration of the arrangement of the thoracic veins, in a case of malignant substernal bronchocele, should have been omitted.

G. H. MAKINS.

The Diseases of the Spinal Cord. By BYROM BRAMWELL, M.D., F.R.C.P., Lecturer on Medicine in the Extra-Academical School of Medicine, Edinburgh. Pp. 300. Edinburgh: MacLachlan and Stewart. London: Simpkin, Marshall, and Co. 1882.

THE first impression one receives on opening this volume is, that we have to do with an atlas rather than with a treatise on the diseases of the spinal cord, such is the wealth of illustrations, partly systematic, partly microscopical, which abound on almost every page of the book. We will at once add that, although some of the engravings have been borrowed from the works of Charcot, Gerlach, Flechsig, and others, yet by far the largest majority of them, and more especially the chromo-lithographic representations of microscopical sections, are from original drawings by the author. In a book, which is evidently intended more particularly for students and practitioners, this way of representing the diseases of the spinal cord has an enormous advantage over mere description, as the reader sees while he reads, and is not required, as in so many other works, constantly to call in the aid of imagination for enabling him to comprehend the text. The perusal of a work of this kind is, therefore, not only instructive but actually entertaining, and only few readers will put it aside without having gone to the end.

The first chapter gives a short and concise introduction to the anatomy and physiology of the cord. The author represents this organ as a series of segments superposed upon one another, and each of which comprehends that portion of the cord to which a pair of spinal nerves is attached. Each segment is, therefore, as it were, a distinct spinal unit for a definite area of the body, viz., that portion of muscle (muscular area) to which its anterior roots proceed, and that portion of skin, tendon, muscle, mucous membrane, viscus, etc. (sensitive area), to which the fibres of its posterior nerve-root are distributed. The principle of the clinical examination of the spinal cord consists, therefore, in the systematic and separate examination of each spinal segment, by observing the motor, sensory, reflex, vaso-motor, and trophic condition of its body area; and the comprehension of the diseases of the organ consists of the correct understanding of the structure and functions of the individual portions of the spinal units, of the

manner in which they are related to each other, of the pathological changes to which they are liable, and of the derangements of function which result therefrom. The description of the anatomical and physiological features of the different spinal segments, as far as they are at present known, is clear and concise, and admirably illustrated.

The second chapter deals with the pathology of the spinal segment. The author classifies the diseases to which the cord is liable as intramedullary and extramedullary. The former he subdivides into (a) primary systemic lesions, in which the disease is limited to a definite physiological tract, and is generally bilateral and symmetrical, and not dependent upon any previous organic change (diseases of the anterior cornua, the crossed pyramidal tracts, and the postero-external, or Burdach's columns); (b) the secondary degenerations, or systemic diseases, which are owing to previous disease of other portions of the nervous system (affections of the crossed and direct pyramidal tracts, and of the postero-internal or Goll's columns); and (c) indiscriminate lesions, which are not confined to definite physiological tracts, but may affect any portion of the transverse section of the cord. To this latter class belong the different forms of myelitis, simple non-inflammatory softening, hæmorrhage and tumours of the cord, and disseminated cerebro-spinal sclerosis. Extramedullary diseases are the several varieties of spinal meningitis. Of Pott's disease of the vertebræ, tumours in the spinal canal which proceed from the bones, membranes, or nerve-roots, but not from the cord itself; injuries, such as fractures and dislocations of vertebræ, wounds, and hæmorrhage into the spinal canal—the pathological anatomy and the symptoms immediately resulting from them are here fully described and illustrated.

The most important chapter of the book, however, is the third, in which the author describes the method of case-taking, and gives a summary of symptoms met with in diseases of the cord, as well as a general plan of diagnosis, prognosis, and treatment. Space forbids us to enter fully into this portion of the work, more especially as the author has nowhere carried conciseness further than here; suffice it, therefore, to say that the reader who has thoroughly digested the statements contained in this chapter, will rarely, if ever, meet with any difficulty in the diagnosis of an individual case of spinal disease. The fourth and last chapter gives a short but full description of the individual organic diseases of the cord, their diagnosis, prognosis, and treatment.

Although Dr. Bramwell's book does not contain any new discoveries, or fresh pathological, diagnostic, and therapeutical facts, we are nevertheless bound to say that, by the peculiar treatment of its subject, it lays claim to originality. We do not as yet possess, either in English or foreign medical literature, a treatise on the diseases of the cord, where we find, in a comparatively small compass, the correlation of normal and pathological anatomy and physiology on the one hand, and the clinical phenomena of disease on the other hand, presented to us in so striking and complete a manner. Dr. Bramwell has not given us any dry bones, but real flesh and blood; and great praise is due to the skill with which he has worked up his subject.

JULIUS ALTHAUS, M.D.

Récherches Cliniques et Anato-mo-Pathologiques sur les Affections Cutanées d'Origine Nerveuse. Par HENRI LÉLOIR. Paris: A. Delahaye et E. Lecrosnier. 1882.

Clinical and Anato-mo-Pathological Researches on Cutaneous Affections of Nerve-Origin. By HENRI LÉLOIR.

M. LÉLOIR has brought together, in a volume of 200 pages, a number of observations which bear on the important question of the influence of the central and peripheral nervous system on the development of lesions of the skin. The author has devoted great care to the preparation of the work, which contains an exhaustive but concise account of all that has been published on this subject during the last few years; and recent English, American, German, and French medical literature have been all carefully scrutinised in the collection of materials. Perhaps the most important parts of the book are, however, those which give the results of M. Leloir's own observations.

The author endeavours to show that, in certain affections of the skin, which have been by many authorities, and more particularly by French physicians, regarded as being directly caused by disorders of the nervous system, there are really important pathological changes to be found in the nerves of the affected part. His examinations were made on nerves treated by osmic acid and stained by picro-carminate of ammonia, and the appearances then observed are portrayed in well-executed chromolithograph plates. He believes that he has demonstrated clinically and by microscopic examination that, in certain cases, vitiligo, ecthyma, pemphigus, cutaneous gangrene, and perhaps ichthyosis, are affections which have a nerve-origin, and are therefore to be brought within the same category as other cutaneous diseases in which a nerve-origin is recognised, viz., certain cases of acute pemphigus, leprosy, *mal perforant*, and bed-sores. In a case of vitiligo, for example, in which a small portion of skin was excised, it was found that the nerve-filaments contained a number of nerve-tubes considerably altered (approximately about 3 in 30) and showed very clearly the lesions of atrophic neuritis. In some tubes the axis-cylinder had completely disappeared, the myelin had separated into drops of various size, and the sheath of Schwann enclosed a substance which the picro-carmin stained yellow—a substance which is found in degenerating nerves. In those tubes in which the changes were more advanced, there was not only disappearance of the axis-cylinder, but the myelin had also completely disappeared; the sheath of Schwann alone persisting, and showing nuclei stained by the carmine in greater number than is found in the normal condition.

It is on analogous changes found in other diseases that M. Leloir bases his views. Before they can be accepted to the full extent advanced by the author, the subject must receive much more attention than has yet been given to it; notably, the condition of the nerve-tubes in the nerves of the healthy skin requires a more exhaustive study. But the author has done excellent service in opening up the question, and in pointing out the lines on which further work must be done. A number of most interesting cases are related in the volume, and the references are very complete. The book is well worthy the attention of all who are interested in the pathology of the skin and nervous system. G. THIN, M.D.

The Diagnosis and Treatment of the Diseases of the Eye. By HENRY W. WILLIAMS, A.M., M.D., Professor of Ophthalmology in Harvard University, etc. London: Sampson Low and Co. 1882.

A CAREFUL examination of this work leads us to a distinctly favourable opinion. The author's individuality is strongly marked, and it impresses itself more particularly upon his methods of treatment, in which, on this account, he appears rather inclined to dogmatise. But we must admit that his recommendations appear to be, in all cases, the result of much and mature thought. He is very severe on the use of acetate of lead, and would exclude it from ophthalmic therapeutics. He speaks of counter-irritation, whether by blisters or setons, in much the same way. He goes out of his way to denounce poultices as dangerous. In these points we cannot entirely agree with him, notwithstanding that the injudicious use of these remedies has undoubtedly done a good deal of harm. He speaks highly of pilocarpine in that frequently troublesome affection, episcleritis, and in ulcers and wounds of the cornea, both as a local application, and subcutaneously. He prefers, and in this we are inclined to agree with him, paracentesis of the cornea in purulent infiltrations to section through the affected region. If the operative treatment of staphyloma corneæ, by excision of its apex, should yield in other hands results as good as he has obtained, this will constitute a most valuable operative procedure, as, in a large number of cases, the inapplicability, as well as the inefficiency of iridectomy, make themselves apparent. From this operation, as from that of removing the entire cornea, or even the cornea and ciliary processes, he does not appear to have had bad results; and he has successfully practised evacuation of the contents of the sclerotic in certain cases where they were undergoing destructive inflammation, and even where a bony cup was formed in relation with the choroid.

He doubts, and apparently with reason, the influence of synechiæ in causing a recurrence of an iritis. He is but moderately prepossessed in favour of sclerotomy, reserving it for the cases where there is little or no prospect of restoring vision. He has good results from section of the optic and ciliary nerves as a substitute for enucleation.

The book is well printed. It is a misfortune that it has so few woodcuts, as its ophthalmoscopic plates, though of good quality, are not numerous. We venture to think that it would also be improved by a formulary.

W. A. BRAILEY, M.D.

NEW INVENTIONS.

A NEW FORM OF CATHETER FOR WASHING OUT THE BLADDER AND URETHRA.

IN order to deal with associated affections of the bladder and urethra by mechanical treatment, Dr. Adolf Fischer of Buda-Pesth has devised an instrument with which the surgeon can irrigate those two organs in succession, without being under the necessity of withdrawing it and introducing it a second time, at a single sitting.

This instrument, which is described and illustrated in the *Illustrirte Monatschrift der Aerztlichen Polytechnik*, Heft 8, 1882, consists of a double catheter, one part of which slips into the other, so as to form

an apparently single instrument. The outer part is 18 centimètres in length and No. 18 or 20 in size (Charrière's scale). It is well curved, and presents the orifice on the concave side of the beak. About $4\frac{1}{2}$ centimètres from the vesical end of this outer catheter are several openings, varying in size. The extra-vesical end of the catheter is conical and furnished with a concave disc for closing the external urethral orifice, above which is a tubular appendage, about half a centimètre in length, furnished with a small peg for fixing the inner catheter. On the upper margin of the concave disc is a small notch, which indicates the position of the catheter as it lies in the bladder and urethra. On the posterior surface of the extra-vesical end, just behind the conical portion of the catheter, are several orifices, some large, others small. The inner catheter is patent and truncated at its lower extremity, and is provided with a large oval orifice near this, and also with another orifice near the upper extremity. The length of this inner catheter from its vesical extremity to the forked part at O is $15\frac{1}{2}$ centimètres, and the instrument is about half a centimètre in thickness. The anterior portion of this inner tube, along an extent of $2\frac{1}{2}$ centimètres, has a double channel. The opening at N serves for the discharge of fluid from one of these channels. The cup-like appendage of this tube serves for the reception of the top of the outer catheter, and the slit at R permits of a rotatory movement of the catheter from right to left, or in the reverse direction. The anterior—the extra-vesical extremity, divides into two curved tubes (SS'), the superior one of which communicates with the whole length of the catheter, and transmits fluid from the irrigator towards its visceral end, whilst the lower tube communicating with the small channel that is cut off from the rest of the inner catheter at P, transmits fluid towards the urethra. For the purpose of special injection into the urethra, a second small tube (T) is added: this communicates with a caoutchouc tube furnished with a stop-cock. When the inner is inserted into the outer catheter, the surgeon, taking the concave disc between the index finger and thumb of the left hand, by rotating this can use the double instrument either as a simple vesical, or is both a vesical and an urethral catheter. When the solid wall of the inner tube is applied to the openings in the outer tube, the extra-vesical orifices are closed, and only the opening in the beak of the larger tube remains free. After the desired amount of fluid has been injected into the bladder, and the entrance of fluid into the catheter has been temporarily arrested, the inner tube may be turned so that its oval orifices correspond to the small orifices in the outer catheter. The fluid then streams out through the openings, and, after having passed along the urethra, passes into the inner tube again, and then flows away. When the upper curved tube, communicating with the irrigation vessel, is in a line with the notch in the concave disc, the instrument is quite free. If it be thought necessary to retain the injected fluid for some time in contact with the mucous membrane of the urethra, the discharge of this fluid may be arrested by fixing a stop-cock to the discharge tube.

ADEPSINE AND ADEPSINE OIL.

Adepsine is a new petroleum compound, somewhat resembling vaseline in general appearance, but

quite white. It is perfectly smooth and bland, and is destitute of even the faintest odour. It will mix with almost anything, and has this great advantage over lard, that it can never, under any circumstances, become rancid. There is no doubt that for ointments it is the basis of the future. Adepsine oil—a colourless liquid also devoid of smell—is an admirable solvent, and is much employed in the preparation of liniments and for toilet purposes. The excellence of these articles is to some extent accounted for by their being made under the personal direction of Professor Fresenius, and in London the preparations have been placed in the hands of the enterprising firm of Willeringhaus, Klinker and Co., Hamsell St., E.C., who are the sole agents for England.

MISCELLANY.

INDUSTRIAL DISEASES.—It has been observed that the manufacture of bichromate of potash has a singular effect upon the nose, manifesting itself in a curious manner. A little hole is formed on the septum of the nose, and increases gradually until the partition entirely disappears, with the exception of its lower part, so that to a superficial observer there is nothing except a little outward depression. It is noticed that, as soon as the partition is destroyed, the process appears to stop there, neither the lungs, air-tubes, nor throat being in the least degree affected. Some workmen at the chrome factory in Russia, where the disease has been chiefly watched, have been employed for ten years and remained unaffected, while with others the hole in the nose begins to be formed after one month's work. But that the disease is something more than an individual peculiarity, is evident from the fact that an inspection of all the hands proved that more than fifty per cent. of the men had diseased noses. The early symptoms are a slight tickling of the part affected, followed by bleeding, but with no uncomfortable feelings; and, in fact, the destructive process is painless.

THE MICROSCOPIC PREPARATION OF PARASITES.—M. F. Balzer, Director of the Laboratory of the St. Louis Hospital, gives the following directions for quickly colouring and preserving parasites. The section or scraping must be washed in ether or alcohol, in order to remove all fatty matter. It is then placed in a saturated alcoholic solution of eosine; the time it should remain depends on its thickness—from half an hour to an hour is sufficient. The excess of eosine is removed by washing the section in distilled water, or, better still, in a solution of potash (40 per 100). The section remains macerating in the potash solution, and is placed on a glass slide under a covered glass. Every day a drop, or two drops, of the potash solution is added to replace loss by evaporation. After a few days, sometimes a few hours, the section is sufficiently transparent and the parasites thoroughly coloured by the eosine. The section is then treated with a saturated solution of potash acetate, which is introduced at the edge of the cover glass. This is fixed by a border of paraffin or wax. The sections thus mounted are preserved for an indefinite period, if care be taken not to press on them in the course of preparation. The same method colours microphytes contained in the liquids of the animal economy.

PSYCHOLOGY AND WITCHCRAFT.—Dr. George M. Beard recently read a paper before the New York Academy of Sciences, the subject being 'The Psychological Explanation of the Salem Witchcraft Excitement and the Practical Lessons derived therefrom.' A large number of members and their friends attended the meeting. On the blackboard behind the platform was drawn an illustration, which Dr. Beard used to exemplify various conditions of the convalescent brain. He opened the lecture by pre-

sending to his audience two boys, both of whose minds were diseased. He had scarcely passed his hands over the face of the older lad, when the latter fell upon the stage in convulsions. He then brought forward the younger boy, who, on being questioned, looked intently at the top of the back of President Newberry's chair, where, he said, he saw a yellow bird. A moment later he was again asked what he saw, and he replied that he saw a hog on the platform, and he gazed intently in the direction where he thought the animal was. Dr. Beard put his hand on the boy's head, and said to the audience: 'They are here; he sees what he wishes to see.' The lecturer then went on to say that herein lay the witchcraft which cost nineteen persons their lives in Salem in 1692, and in the years preceding brought death to a million of persons in Europe. In 1695, the people of Salem began to feel that, after all, they had done wrong. Dr. Beard said that the condition of Whitaker at West Point was something similar to that of the older boy on the stage when they attempted to wake him up, and the evidence that proved his innocence was that which was used to prove him guilty. Several times during the lecture, Dr. Beard referred to the trial of Guiteau, and pronounced him to be insane for the past twenty years. At the close of the paper, an interesting discussion ensued, and several questions were propounded to the lecturer. In the course of his answers, he said that spiritualism and kindred issues were signs of a progress in the brain from the mental delusions of witchcraft. The two boys on the platform were still asleep when the Academy adjourned, and were awakened with some difficulty.

THE DIFFUSION OF BACTERIA.—The researches of M. Pasteur and Darwin have shown how earthworms may aid the diffusion of small organisms, some of which may produce disease. Professor Schnetzler states that the dejections of earthworms always contain numerous living bacteria and their germs (the hay bacterium included). It is clear that bacteria in enormous quantity float in the air about us; and we have at easy command, Professor Schnetzler points out, a small apparatus traversed by about 8,000 cubic centimetres of air per minute, which may inform us as to those floating germs. This is no other than the nasal cavity, on the mucous surface of which air-particles are deposited. To observe these he advises injecting the nose with distilled water (completely sterilised) by means of a glass syringe previously calcined. The liquid so obtained is put in one perfectly clean watch glass and covered by another. With a microscope magnifying 700 or 800, one finds among various particles in the liquid some real live bacteria. If the liquid be kept a few days in a clean glass tube hermetically sealed, the bacteria are found to have increased very considerably. *Bacterium termo*, *vibrio*, *spirillum*, *bacillus subtilis*, even some *infusoria*, and spores and fragments of fungi are seen. Professor Schnetzler has further successfully cultivated the organised germs by means of a mixture of gelatine and distilled water. It may be asked, why do not those bacteria in the nasal cavity always multiply and develop and penetrate to the windpipe and lungs? To which the answer is their progress is doubtless opposed by the vibratory movements of cilia in the air passages, and the weakly alkaline reaction of the nasal mucous may, it is also suggested, be unfavourable to some of them. Cohn has proved that bacteria producing acid fermentation perish in liquids with alkaline reaction. Infectious bacteria may, however, multiply to a formidable extent on living mucous surfaces, witness the growth of the *micrococcus* of diphtheria, brought by the air into the air-passages; also the *bacterium* of anthrax. The *bacillus* of tubercle, as Koch has lately shown, may be transmitted from one person to another by the air passages. Professor Schnetzler thinks hay fever may also be due to bacteria entering the nose. While the development of bacteria on normal mucous surfaces is usually limited, millions of them are found in the dejections of healthy children.

Hunyadi Fános

"THE RICHEST

NATURAL

APERIENT WATER."

Baron Liebig in "*Lancet*."

"Certain and Painless,
Soft and Mild."

Prof. V. GARTNER,
STUTT GART.

"OF GREAT USE IN
HABITUAL
CONSTIPATION."

Medical Times & Gazette.

USES AND RECOMMENDATIONS.

Hunyadi Fános As a Laxative and against Obstinate Constipation
"Has remarkable success in all diseases for which aperient
waters are used."
Professor BAMBERGER,
University of Vienna.

Hunyadi Fános Against Hæmorrhoids and Portal and Hepatic
Congestions.
"Prompt, certain, and without inconvenience."
Prof. VON BUHL,
Munich.

Hunyadi Fános In Bilious Attacks and Sick Headaches.
"Favours the secretion and excretion of bile, and removes
congestive and inflammatory conditions of the liver."
Prof. ALOIS MARTIN,
University of Munich.

Hunyadi Fános For Relieving Obesity, Gouty Attacks, and Internal
Congestion.
"I have used the HUNYADI FÁNOS WATER in many
cases of the rheumatic and gouty diathesis with very marked benefit.
In cases accompanied with great obesity I prefer it to any other
laxative."
Prof. Lewis A. Sayre, M.D.,
Bellevue Hospital, New York.

Hunyadi Fános During Pregnancy; for Nursery Use; and in many
Female Disorders.
"I prefer this to any and every other."
Dr. J. Marion Sims,
*New York, President of the Gynæcological Society of America;
Honorary Fellow of the Obstetrical Societies of London and Dublin.*

Hunyadi Fános Against Evil Consequences of Indiscretion in Diet.
"Has invariably good and prompt success; a most valuable item
in the balneological treasury." Professor Virchow, *Berlin.*

Hunyadi Fános "In the Uric Acid Diathesis and prevention of
Urinary Calculi in treatment, HUNYADI FÁNOS
acts in a much more energetic manner than Friedrichshall, Carls-
bad, or Marienbad; can be given in much smaller doses, and has
the advantage of being less unpleasant to the taste. Sir Henry
Thompson has pointed out the fact that the artificial waters made
in imitation of the natural mineral waters do not seem to have
the same beneficial effect."

"New York Medical Journal," August 1880, Dr. F. Weir,
in Lecture delivered to the College of Physicians and Surgeons, New York.

THE NAME OF THE APOLLINARIS COMPANY, LIMITED, ON EVERY LABEL SECURES GENUINENESS.

Of all Chemists, 1s. 6d. and 2s. per bottle. Ordinary Dose, a Wineglassful.

It is most efficacious when taken in the morning fasting, warmed to a temperature not below 60°, or when an
equal quantity of hot water is added to it.

Crown 8vo (87 pages), price One Shilling.

THE TRUTH ABOUT VACCINATION.

An Examination and Refutation of the Assertions of the Anti-Vaccinators.

By **ERNEST HART,**

Chairman of the Parliamentary Bills Committee of the British Medical Association, and Chairman of the Council of the National Health Society.

EXTRACT FROM AUTHOR'S PREFACE.

'It seems needful to explain in a few words the circumstances under which this pamphlet comes to be published. I have, for several years past, been frequently appealed to, by all sorts of people, on all sorts of occasions, for a statement of the facts which would enable them to answer the strong assertions of a certain class of agitators who describe themselves as anti-vaccinators. These gentlemen are so very persistent in their agitation, and so elaborately wrong in their statistics and arguments, that it has really become a matter of no small difficulty for a technically un instructed person to examine their figures or test their allegations.

'On the occasion of two of the most recent Parliamentary elections, I was hurriedly applied to by candidates for references to the sources from which to answer their anti-vaccinating persecutors. Members of Parliament and magistrates are, indeed, often at their wits' ends to know where to find the true facts which these gentlemen delight to misrepresent.

'I have, of course, been able to refer enquirers to the standard works on the subject, and to the Registrar-General's statistics; but a need evidently exists for some more concise statement of the merits of vaccination, which will obviate the necessity of individual research into the evidence in its favour. As a matter of fact, I have not been able to refer my enquirers to any such statement, and it seemed to me, therefore, that there would be great advantage in the truth about vaccination being placed before the public in a handy and readily accessible form, so as to supply the materials for an answer to the numerous objections of the anti-vaccinators. Under these circumstances I consented, at the request of the National Health Society, to deliver a public lecture on the subject. This lecture was given at the Hall of the Society of Arts, on the 27th of January last, and is now, in compliance with very numerous requests, printed (with considerable additions) in the present pamphlet.'

SYNOPSIS.

CHAPTER I.

SMALL-POX UNCONTROLLED BY VACCINATION.

Introduction.—Anti-vaccination tactics—Perversions and inaccuracies of anti-vaccination tracts—Small-pox in its natural state, uncontrolled by vaccination—Amongst remote communities—Among the Indians—In civilised Europe—In England—In royal and noble families—After effects of non-fatal attacks of small-pox—Macaulay's description of ravages of small-pox in seventeenth century—Introduction of inoculation and of vaccination—What vaccination is: Jenner's opinion—Power of vaccination in influencing small-pox—Modifying power of vaccination—Statistical evidence of the different degrees in which persons vaccinated in different ways will be safe against death by small-pox.

CHAPTER II.

OBJECTIONS TO VACCINATION.

The anti-vaccination creed—Reckless and absurd nature of objections—Alleged introduction of diseased matter by vaccination—Allegation that vaccination is small-poxing—M. Chauveau's experiments—Their fallacy explained—Mr. Ceely's and Mr. Badcock's successes in the variolation of kine—Use of variola-vaccine lymph never followed by infection of small-pox—Inaccuracy of statement that vaccination is mainly derived from small-pox inoculation of calves—Real source of chief part of lymph in present use—Absurdity of allegation that vaccination breaks the law forbidding inoculation.

CHAPTER III.

ALLEGED MISCHIEF FROM VACCINATION, AND INCREASED MORTALITY FROM CERTAIN DISEASES.

Allegation that vaccination propagates ethetic and constitutional diseases—Source of fallacy with regard to this question—Vaccination gives immunity from small-pox only—Explanation of Mr. Hopwood's Parliamentary Return of 1877—Comparison of present with past diseases very liable to fallacy—Hypothesis that vaccination renders persons more liable to other diseases than small-pox contrary to the whole current of medical experience—Allegation that cutaneous diseases and glandular swellings are introduced by vaccination—Erysipelas after vaccination—Syphilis after vaccination—Allegations of invaccination of syphilis may easily be made in cases where there is not even a pretext for them—Practical and common sense view of question—Experience of Medical Department of the State as to alleged injury from vaccination—Danger, if there be any at all, of communicating through vaccine lymph any other infection than its own, practically non-existent—Medical concurrence in belief of non-communicability of disease by vaccination—Opinion of Select Committee of House of Commons on the question—Animal vaccination—Its advantages.

CHAPTER IV.

SMALL-POX CONTROLLED BY VACCINATION.

Allegations that vaccination intensifies small-pox, and that it does not diminish the small-pox death-rate—London experience—

Average fatality from small-pox in Metropolis forty times greater in seventeenth and eighteenth centuries than now—Results of more general practice of vaccination—Diminution of small-pox mortality—Change in proportional fatality of small-pox at different ages, due to vaccination of young children—Increasing protection of young children from fatal small-pox—Experience of Metropolitan Asylums Hospitals in recent epidemic—Small influence of sanitary measures on small-pox.

CHAPTER V.

VACCINATION AS A PROTECTIVE AGAINST SMALL-POX.

Complete inaccuracy of allegation that vaccination has no power of preventing small-pox—Incomplete protection after puberty afforded by much of past vaccination—Importance of re-vaccination—Effect of vaccination upon susceptibility to small-pox in the individual—Experience of last epidemic—Beneficial effects of vaccination most marked in mortality from small-pox—Varying protection afforded by different qualities of vaccination—Mr. Marson's evidence given before the House of Commons—Experience of Metropolitan Asylums Hospitals—Distribution of small-pox mortality amongst the unvaccinated and persons vaccinated with various degrees of completeness—Vaccination marks of patients at Homerton and Hampstead Small-pox Hospitals—Conclusion as to relative mortality amongst vaccinated and unvaccinated—Results of examination of vaccination marks of recruits—Mr. Marson on degrees of severity in small-pox after vaccination.

CHAPTER VI.

RE-VACCINATION.

Desirability of re-vaccination—Age at which it should be performed—Absolute protection afforded by re-vaccination to nurses of Small-pox Hospitals—Also to nurses and attendants of Metropolitan Asylums Hospitals—Protective influence of re-vaccination amongst soldiers and sailors—Marked decrease of small-pox mortality amongst these protected services—Concluding suggestions.

SUMMARY OF CONCLUSIONS.

APPENDICES.

- A.—Official instructions for vaccinators under contract.
- B.—Letter of the Local Government Board on the subject of repeated vaccination prosecutions.
- C.—Table I. Small-pox mortality in England and Wales.
- D.—Table II.—Annual mortality from small-pox in England and Wales, with the proportion of deaths to population and to total mortality, from 1838 to 1877 inclusive.
- E.—Table III.—Small-pox mortality in England and Wales at various groups of ages in each of the 32 years, 1847-78.
- F.—Table IV. Cases and deaths from small-pox amongst the British troops serving in the United Kingdom for 18 years (1859-76).
- G.—Table V.—Cases and deaths from small-pox in the British Navy employed on the home force for 20 years (1859-78).

Copies of the Pamphlet (Price One Shilling) may be obtained of all Booksellers, or will be sent post free by the Publishers on receipt of Stamps or Post Office Order.

LONDON: SMITH, ELDER, & CO., 15, WATERLOO PLACE, S.W.



Books of SOAP LEAVES, indispensable for Sportsmen, Volunteers, Boating-men, and all Travellers. One Leaf is sufficient for a good wash. Blocks of Leaves, mounted on Cardboard, for hanging up in Lavatories.

CARBOLISED LEAVES, in Leather Books, invaluable for Medical Practitioners. Favourably noticed in *Lancet*, July 15th, 1882, page 57.

Retail of all Chemists, Perfumers, Stationers, etc.

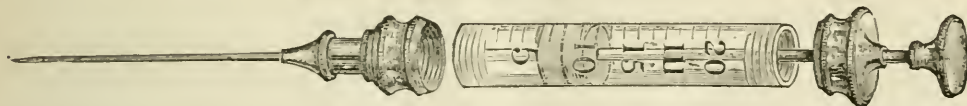
Made up in Three Qualities.

ONLY WHOLESALE HOUSES SUPPLIED AT
13, HAMSELL STREET, FALCON SQUARE, LONDON, E.C.

BY ROYAL LETTERS (No. 5398) PATENT.

THOMAS NICHOLLS AND SON'S PATENT HYPODERMIC SYRINGE.

IN ALL SIZES AND VARIETIES.



With TRANSPARENT UNBREAKABLE CYLINDER, impervious to all fluids, and warranted to stand in any climate.

This Invention offers a very important advantage not possessed by any other Syringe—namely, *the cylinder has the transparency of glass, and cannot be broken under any circumstances.*

To be had of all Instrument Makers in Town or Country.

The Patented Enterprise of the Salts of the Mineral Waters of Portugal.

SALTS OF THE WATERS OF MOURA.

These Salts are peculiarly advantageous in diseases of the stomach, liver, kidneys, bladder and womb, and substitute with advantage any alkaline waters. They do not weaken the system.

SOLE AGENT IN ENGLAND:

CAMILLO DE FIGUEIREDO,
8, PARK AVENUE, LONGSIGHT, MANCHESTER.

Price 4s. per Bottle.

WILSON'S

The essential constituents and properties are printed on the label of each bottle sent out

Wholesale London Agents:—JACKS & CO., Chemists, 161, Gower Street, W.C.

Report from CHARLES A. CAMERON, M.D., F.R.C.S.I., Professor of Chemistry and Hygiene in the Royal College of Surgeons, Ireland; Medical Officer of Health and Analyst for Dublin; Analyst to the Royal Agricultural Society, etc.—
Royal College of Surgeons, Dublin, July 30th, 1893.—I have examined a specimen of LIN. PLUMBI LACTATIS Co., submitted to me for that purpose by Mr. JOHN P. WILSON, Chemist, of Reading, and the following are the results at which I arrived:—I consider it an excellent application to the Skin when affected with such cutaneous affections as Eczema, Prurigo, Impetigo, etc., as well as for inflammation arising from Scalds, etc. From the composition of this preparation I am satisfied that its use will be attended with decided benefit, and I can confidently recommend it to the notice of Medical Practitioners.

From JAS. STARTIN, Esq., M.B. Camb., M.R.C.S., etc., Surgeon to St. John's Hospital for Skin Diseases, London.—'I have prescribed your LIN. PLUMBI LACTATIS both in private and in Hospital practice, and find it a capital remedy in all cases of Eczema, Prurigo, in Gouty and Rheumatic Eczema especially, and Impetigo of children.'

From W. JOHNSON SMITH, Esq., F.R.C.S., Senior Surgeon to the Seamen's Hospital, Greenwich.—'During the past twelve months Wilson's LIN. PLUMBI LACTATIS has been extensively used in this hospital with very satisfactory results, both in cases of skin disease, and those of severe injury by burning.'

WHOLESALE & FOR EXPORT OF THE PROPRIETOR,

J. P. WILSON, Manufacturing Chemist, Reading.

PLUMBI

ODED LOWSLEY, Esq., M.R.C.S., L.S.A., Surgeon to Reading Dispensary, Public Vaccinator, says:—'I consider it is of excellent value as a local application in Erysipelas. In infants suffering from inflammation extending down the arm after vaccination, a few applications of the Liniment arrests the swelling, and checks the spread of the disease.'

LACTATIS CO.

NEW IMPROVEMENTS IN PHARMACY.

THE BURROUGHS INHALER.

'Is an ingenious and convenient device for inhaling chloride of ammonia fumes; by its use the chloride of ammonium is brought in more intimate contact with the mucous surfaces of the passages of the nose and throat than by any other form of inhaler.'—THE MEDICAL PRESS AND CIRCULAR Reports.

For full Notes and Reports see front pages of
THE LANCET, May 6th.

KEPLER EXTRACT OF MALT.

THE LANCET says of the Kepler Extract of Malt: 'The best known, and in this country the largest used Extract of Malt. It is as distinct an advance in therapeutics as was the introduction of cod-liver oil. It is one of our best remedies for atonic dyspepsia, and is undoubtedly useful in consumption and other wasting diseases.' And further adds, 'It is very good, and may be used with confidence.'

For wasting Diseases. For full Notes and Reports see front pages of
THE LANCET, May 6th.

McK. & R. CAPSULED PILLS.

An important improvement has been made, which now renders the most offensive and repulsive drugs easy of administration. This improvement consists in perfectly sealing with a thin transparent capsule of gelatine all drugs such as quinine, morphia, rhubarb, etc., also the various pills and powders of the pharmacopoeia. These capsules are of an ovoid shape, and it has been demonstrated beyond question that when ordinary coated pills are rejected by patients there is not the slightest difficulty in administering this new form.

For full Notes and Reports see front pages of
THE LANCET, May 6th.

KEPLER COD-LIVER OIL WITH EXTRACT OF MALT.

This is an emulsified combination of the purest fresh Norwegian Cod Liver Oil with 50 per cent. of Extract of Malt (Kepler).

So combined, the oil is subdivided into minute particles which can be seen under the microscope to be as fine as the granules of milk; and much finer than any that can be obtained by any emulsion with gums. On the fineness of the emulsion depends the digestibility of the oil. 'The digestive change undergone by fatty matters in the small intestine consists mainly in their reduction into a state of emulsion, or division into infinitely minute particles.'

For full Notes and Reports see front pages of
THE LANCET, May 6th.

THE BURROUGHS BEEF AND IRON WINE.

'This is a really valuable preparation, and, as far as we know, a novelty. It contains beef juice and citrate of iron in solution in wine, and is therefore a very powerful and rapidly-acting tonic. Children, as well as adults, take it easily; and, as its taste is by no means unpleasant, it can hardly fail to attain great popularity. In many cases of scrofula and rickets we have given it with the most gratifying results.'—THE LANCET Report.

For full Notes and Reports see front pages of
THE LANCET, May 6th.

LAWTON'S ABSORBENT COTTON.

'Has been pronounced by some of our most eminent surgeons the very best absorbent for taking up discharges; it is very fine and soft, and acts instantly.'—THE MEDICAL PRESS AND CIRCULAR.

For full Notes and Reports see front pages of
THE LANCET, May 6th.

THE WYETH COMPRESSED TABLETS.



'Are a great improvement on the hard, unpalatable lozenges which have so long done duty in the Pharmacopoeia. The Chlorate of Potash and Chlorate of Potash and Borax will be found useful in throat affections, whilst the Bicarbonate of Potash and Bicarbonate of Soda Tablets will prove efficacious in dyspepsia. The Soda Mint, or Neutralising Tablets, will earn the gratitude of many a flatulent dyspeptic.'—LANCET.

For full Notes and Reports see front pages of
THE LANCET, May 6th.

HAZELINE.

THE MEDICAL PRESS AND CIRCULAR reports:—'Hazeline is a valuable astringent remedy, wonderfully efficacious in checking internal or external hemorrhages, and for allaying inflammation. It is particularly valuable in the treatment of bleeding piles, and as a surgical dressing it deserves attention.'

For full Notes and Reports see front pages of
THE LANCET, May 6th.

THE WYETH SOLUBLE COMPRESSED HYPODERMIC TABLETS.

The following formulæ and combinations embrace all those in general request. Others will be added as the demands of the profession warrant.

We claim for the Wyeth Hypodermic Tablets:

ABSOLUTE ACCURACY OF DOSE.

READY AND ENTIRE SOLUBILITY.

PERFECT PRESERVATION OF THE DRUG.

Their convenience and utility will at once be apparent on examination.

Morphiæ Sulphas 1-3 grain.	Morphiæ Sulphas 1-8 grain.
Morphiæ Sulphas 1-4 grain.	Atropiæ Sulphas 1-200 grain.
Morphiæ Sulphas 1-6 grain.	Morphiæ Sulphas 1-12 grain.
Morphiæ Sulphas 1-8 grain.	Atropiæ Sulphas 1-250 grain.
Morphiæ Sulphas 1-12 grain.	Atropiæ Sulphas 1-60 grain.
Morphiæ Sulphas 1-3 grain.	Atropiæ Sulphas 1-100 grain.
Atropiæ Sulphas 1-120 grain.	Atropiæ Sulphas 1-150 grain.
Morphiæ Sulphas 1-4 grain.	Strychniæ Sulphas 1-60 grain.
Atropiæ Sulphas 1-150 grain.	Strychniæ Sulphas 1-100 grain.
Morphiæ Sulphas 1-6 grain.	Strychniæ Sulphas 1-150 grain.
Atropiæ Sulphas 1-180 grain.	

For full Notes and Reports see front pages of
THE LANCET, May 6th.

THE WYETH DIALYSED IRON.

1. It is easily administered, the dose being very small.
2. It has no unpleasant taste or smell.
3. It does not irritate the stomach.
4. It has no effect on the bowels, producing neither constipation nor diarrhoea.
5. It does not blacken the teeth.

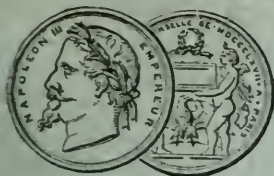
In ordering please specify Fer. Wyeth 3 oz. with Dropper.

NOTE.

All the articles mentioned on this page may be obtained from respectable Dispensing Chemists and Wholesale Drug-gists in every part of the world, or from the European Dépôt of Burroughs, Wellcome, & Co., 7, Snow Hill, London, E.C. Our New Formulæ Book and Trial Specimens of any of our Preparations will be sent to any Member of the Profession upon request.

BURROUGHS, WELLCOME, & CO., Manufacturing Chemists. 7, Snow Hill, London. E.C.

CARRIAGES EXTRAORDINARY.



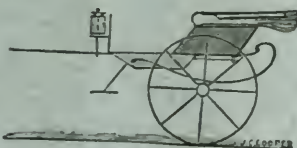
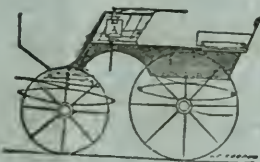
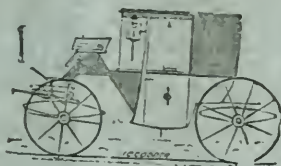
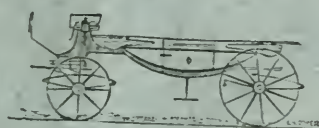
WINDOVER'S

CELEBRATED LIGHT AND DURABLE PATENT

CARRIAGES,

Which have been
awarded the
First Prize Medals at
PARIS;
MOSCOW; VIENNA;
CHILI;
PHILADELPHIA;
MELBOURNE; SYDNEY.

These Carriages are
made at about
Half the Weight of
ordinary ones.



FOR EASE,
ELEGANCE,
AND
DURABILITY,
ARE NOT TO BE
EQUALLED.

Testimonials
and
Opinions of the Press
forwarded
on application.

C. S. WINDOVER,

Coach Builder to the Queen and H.R.H. the Prince of Wales,

32 & 33, LONG ACRE, 154, PICCADILLY, W., LONDON;
25, King Street, Manchester; & Cannon Street, Huntingdon.

The continued increase of patronage of these vehicles by the Nobility, Gentry, and the discriminating portion of the public, is the strongest proof of their superiority over all others, and for ease, lightness, elegance, and durability, are not to be equalled by any other maker.

N.B.—VERY LIGHT BROUGHAM,

Only used a few times, the property of a gentleman, who will take a very low price. Can be bought on easy terms.

On View at 32 and 33 Long Acre, W.C.

THE A & H 'TASTELESS' CASTOR OIL.

(OL. RICINI INSIPIDUM, A & H.)

TRADE



MARK.

A.D. 1715.

Pure, Active, & Absolutely Free from Odour
and Unpleasant Taste.

The A. & H. CASTOR OIL will, we believe, be found free from the only drawback that has hitherto attended the use of, perhaps, the safest, surest, and most generally valuable aperient known. It possesses all the well-known properties of the remedy, but is entirely free from the nauseous smell and taste, a result never before attained. The activity of this Oil is in no degree reduced by the new method of manufacture. It is equal in this respect to the best East Indian Oil, and superior to the Italian, hitherto preferred as the least repulsive variety, and often sold as 'tasteless'.

The *Lancet*, March 4, 1882, writes:—"Messrs. Allen & Hanburys have recently introduced a variety of Castor Oil which seems likely to supersede the old-fashioned form with which we are all so familiar. Their "Tasteless" Oil is absolutely pure, is almost colourless, and is as free from disagreeable taste or smell as anything of the nature of oil can be. We have given it an extensive trial, and find that it is taken both by children and adults without the slightest difficulty, while its aperient effects are unquestionable. It possesses all the advantages that are claimed for it." See also the *British Medical Journal*, Jan. 28, 1882; the *Medical Times and Gazette*, Jan. 7, 1882; the *Medical Press and Circular*, March 15, 1882; and the *Chemist and Druggist*, Feb. 15, 1882.

The A. & H. 'Tasteless' Castor Oil is sold only in bottles bearing ALLEN & HANBURYS' Signature and Trade Mark, at (retail) 6d., 1s., 1s. 9d., and 3s., and for the convenience of the Profession in half-gallon Winchester Quarts at 8s. per dozen, usual terms. Doses the same as of oil of the ordinary quality.

ALLEN & HANBURYS will have much pleasure in sending a **SAMPLE, CARRIAGE PAID**, to any member of the Profession on application.

FRY'S

COCOA

AND

FRY'S



CHOCOLATE

Are combinations of FRY'S PURE COCOA EXTRACT and CHOCOLATE PASTE with ALLEN & HANBURYS' CONCENTRATED EXTRACT of MALT, affording delicious beverages. The Extract may be most agreeably taken in either of these forms. Sold in tins at 1s. and 2s. each, 9s. and 18s. per dozen. The COCOA is in the form of Powder, the CHOCOLATE of PASTE, and sweetened.

Lancet, December 18, 1880.—"This is an excellent preparation of Cocoa and Malt Extract. It is dried at a gentle heat to avoid injury to the diastase; its dietetic and digestive value is beyond all dispute, and it is very agreeable in flavour."

See also—*British Medical Journal*, Nov. 13th, 1880; *Medical Times & Gazette*, Jan. 1st, 1881; *Medical Press*, Jan. 26th, 1881.

SCHIEFFELIN'S

mass is worked to the highest possible degree of uniform coating is an inert, tasteless, and colourless compound, which is so transparent, colourless, and thin, that the distinctive colour of each pill is revealed through the coat. No sub-coating is used. The solubility of the coating is not impaired by age. All the official pills, as well as any others ordered by the Medical Profession, can be furnished in this form. They can be implicitly relied upon in every respect. The coating, while thoroughly protecting the pill, will not be found to in any way interfere with the action of the drug, and those who have found sugar or chalk-coated pills objectionable, owing to the liability of the coating becoming insoluble by age, will find our coating to dissolve as readily after many years as when first prepared. It, moreover, does not form a hard tough shell, as is the case with the ordinary gelatine coating. We claim and believe our Coated Pills to be nearer perfection than any similar goods that have been offered, and guarantee the pills to be as

Are made of the best materials; perfectly protected; entirely and quickly soluble; coated while soft; not subjected to the injurious effects of heat in the process of manufacture. The intermixture, and subdivided with scrupulous exactness. The

SOLUBLE

PILLS.

A Book of about 400 Formulæ, containing doses, also descriptive circulars, price lists, and samples, can be had on application to
ALLEN & HANBURYS, Plough Court, Lombard Street, London.